

BUTANE-PROPANE *News*

A CHILTON PUBLICATION

SEPTEMBER 1960



UNITY + INDEPENDENCE:
Story of PD (p. 25)

HEADQUARTERS FOR L.P. GAS INFORMATION SINCE 1931

*How inefficient
can you
afford to be?*



To stay ahead in today's competitive race you should take steps to curb those inefficiencies that nibble away at profits. Take "out-of-gas calls" for instance. With vapor meters you can cut out those expensive emergency deliveries. You can eliminate costly call backs caused by no one being home. Fills can be made at your convenience and on a regular planned basis.

Also, metering will help you clean up ex-

pensive office red tape by putting your billings on a systematic, pay-as-you-use basis. Lowered accounts receivable is another advantage.

The full facts on all the advantages of metering are spelled out in our brochure ADV-41. Write for your copy. Rockwell Manufacturing Co., Pittsburgh 8, Pa. In Canada: Rockwell Manufacturing Co. of Canada, Ltd., Box 420, Guelph, Ontario.

VAPOR METERING *will improve your profit picture*

GO MODERN WITH THESE MODERN METERS

Rockwell vapor meters are made with a sturdy, rust-proof, impact resistant aluminum outer case. They are safe, dependable and accurate—easy to install on brackets. Their capacity of up to 240,000 Btu's per hour is ample for practically all services.

LP-GAS VAPOR METERS

another fine product by

ROCKWELL



When you up-end your cylinders, what do you see

Rust and corrosion? Not if your cylinders are Hackney double-bottom head cylinders! The smooth, rounded contour of the *second full bottom head* leaves no place for rust and corrosion to form.

Crushed foot rings? Not if your cylinders are Hackney double-bottom head cylinders! The integral, fluted foot ring and double-bottom head construction, welded all around, adds the strength needed to withstand rough handling and accidental dropping.

Worn-out bottoms? Not if your cylinders are Hackney double-bottom head cylinders! These strong cylinders can end bottom failure for many years beyond the lifetime of conventional cylinders! Fewer cylinder replacements and more money for profits.

A deep, rusted crevice? Not if your cylinders are Hackney double-bottom head cylinders! There is no sharp angle where foot ring and bottom are joined. Cleaning and painting are easy to do. Rust can't get a foothold.

Mud, snow and ice? Not if your cylinders are Hackney double-bottom head cylinders! The broad, shallow, fully rounded bottom offers virtually no chance for accumulations of compacted materials.

Check your cylinder bottoms now. Consider what Hackney *double-bottom* cylinders can save you in maintenance time, repainting dollars and rebuilding costs. Write for quantity prices and delivery dates.



Hackney LP-Gas cylinder—Model RC-100A-DB
Cross section shows how Hackney patented double-bottom head construction is stronger, doubles life of cylinder, makes cleaning and painting easier, and reduces replacement and maintenance costs.



Pressed Steel Tank Company

Manufacturer of Hackney Products

1487 South 46th Street, Milwaukee 14, Wisconsin
Branch offices in principal cities

LP-GAS CONTAINERS FROM ONE POUND TO 30,000 GALLONS



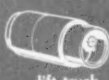
cylinders



systems



fuel tanks for
trucks and tractors



lift truck
cylinders



tank trucks



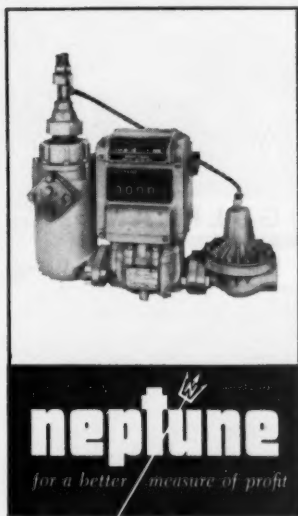
transports



bulk storage tanks



...YET IT'S A COMPLETE LP-GAS METERING SYSTEM IN ONE SPACE-SAVING UNIT



The Neptune LP-gas truck meter is the only meter with all accessories built-in so compactly . . . a complete, accurate system that requires only *three* connections to install, takes space a little larger than this magazine.

In one assembly you get the most reliable meter built, vapor release, strainer, pressure relief valve, inlet check valve, differential valve, and vent line check valve. Plus a ticket-printer. All units are designed to work together as one integrated and compact package. Always easy on your pumps.

Most important, all elements are *designed, built, assembled, and calibrated as one unit by Neptune.*

Add to this Neptune's fine reputation for sustained accuracy and low maintenance, and you have the LP-gas man's most sought-after business friend.

All sizes. Backed by nation-wide network of Neptune-operated service centers. Your Neptune jobber or tank truck builder will be glad to supply details.

NEPTUNE METER COMPANY

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Branches and Jobbers in All Principal Cities
In Canada: Neptune Meters, Ltd., Toronto, Ontario

LIQUID METER DIVISION

SOON

DEMANDS WILL INCREASE RAPIDLY

... WILL **YOU** BE PREPARED
FOR COLD WEATHER?

PLAN NOW

have all your tanks and your
customers' tanks full of Warrengas
or Gulftane by early this fall.

• Contact our nearest Sales Office.



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TULSA, OKLAHOMA

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198 So. Alvarado St., Los Angeles 57
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Uncovering a hidden talent

AMONG ALL THE THOUSANDS of people employed in LPG firms throughout the country, there is no doubt a great deal of hidden talent. Men who could be great writers may be toiling on the less glamorous jobs of filling cylinders or driving trucks. The world may be deprived of a few Ernest Hemingways just because it's so important to keep the kids fed day in and day out.

There are probably some fine artists, too. More and more people seem to be turning to this kind of outlet for their creative energies, which have no chance for expression in the daily grind of making a living.

Being a medium for creative expression of a sort, BPN is always glad to have the opportunity to present one of these heretofore undiscovered talents to its readers. It happens all too rarely.

A couple of months ago, Howard Judkins, vice president of Dead River L.P. Gas Co., Bangor, Maine, sent us along a few cartoon sketches from the pen of Ed Parent. Parent works with Thomas Hicks, distributor of Dead River bottled gas throughout the greater Bangor area.

Writes Judkins:

"Mr. Parent recently completed



So! I have finally found where you hide your liquor!

a three-year tour of duty in the Army. He served in the infantry in Korea, in addition to a year at Fort Sill, Okla. At Fort Sill, he devoted his time to reproducing drawings of new weapons for the study room walls. Obviously, the army quickly recognized his talents.

"His present activities include some work in creating and producing signs, and the painting of a mural in the recreation room of the local VFW hall."

And now he has "made" a national magazine (see below). We don't know whether it's the first time; we hope it won't be the last.

BACK TALK

"Tickled pink"

Dallas, Texas

We are tickled pink at the practical, common-sense advice contained in the article on carburetion conversions (Convert Your Way to Profits—Part 1, BPN, June 1960, page 86).

There is so much nonsense going around, put out by irresponsible peddlers and pseudo-experts. Your advice gets right down to wrenches, screwdrivers and pressure gauges, which are the everyday tools of the practical LPG carburetion man.

We preach the same doctrine. This stuff is not a deep, dark secret, nor does it require elaborate tools and prolonged schooling.

We are thinking of adding the plug scope or the AC oscilloscope to our list of instruments which are useful, yet optional. We feel you overlooked spark plug socket and feeler gauge, automotive vacuum gauge, tubing cutter and flaring tool (which LPG men already have), and for holes in fenders we prefer a punch, chisel and hammer.

ROBERT N. JONES
ENGINEER
J & S Carburetor Co.

BUTANE-PROPANE News

Mr. Jones is quite right, the feeler-gauges and plug wrench were missing from the tool kit. I suggested in the second article that a flaring tool should be used on brass tubing to make inverted flares.

Referring to the plug scope and oscilloscope, the dealer will make his own choice of the tools he feels will be useful to him. One man will make all his adjustments with a tachometer only. Another will do just as good a job with a vacuum gauge. Yet, another will rely solely on the exhaust analyzer. Many Detroit engineers whom I know personally will rarely put their trust in an exhaust analyzer. They much prefer a vacuum gauge so they can read immediately what the gauge says instead of waiting for the analyzer to balance out, whereas the analyzer is usually the main tool in the L. P. gas industry. Perhaps LPG men are more patient. JOHN E. HALLBERG

LPG in Iraq

Baghdad, Iraq

We wish to inform you that our LP-Gas Distribution Bureau has recently been established in Baghdad (Iraq), Rashid St., South Gate, and is the only organization responsible for the distribution of L.P. gas in the Republic of Iraq for domestic industrial and agricultural purposes.

We should like to acquaint the various peoples of the world, many of whom are at the same time your most important clients, with our bureau in order that those interested could easily approach us on matters concerning gas and/or gas appliances for introduction to the people of Iraq. We deem it most important with a view to achieving our aim to have a word on the subject published in your BPN.

KHALIL JAMMOOA
MANAGER

LP-Gas Distribution Bureau

TBDA gets behind flame cultivation

Plainview, Texas

"Big Push in Flame Cultivation" (BPN, July, page 29) was a very good article and is being read and well received with favor by many

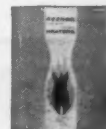
SELL MORE "TOUGH BUYERS" WITH REZNOR...

more types and sizes of direct-fired heaters to choose from!

Now you can satisfy "tough buyers" with just the right model heater for every job. The Reznor line features more types and sizes than any other! Choose from:

- Money-saving, space-saving unit heaters with three control options, propeller or blower fans, 25,000 to 30,000 Btuh.
- Low cost, versatile duct furnaces in capacities of 50,000 to 300,000 Btuh and up, for central heating, year-round air conditioning, or heating of make-up or process air.
- Matching, quiet-operating blower packages, if a separate air handler is needed.
- The new Reznor Venter, an automatic vent exhauster that lets you install Reznor unit heaters almost anywhere.
- Effective, five-way heaters for high ceiling applications, 300,000 to 600,000 Btuh.
- Heavy duty, forced air heaters, 400,000 to 2,000,000 Btuh, that you can floor-mount or suspend, and use with air discharge nozzles or ductwork.

Ask your distributor for a copy of Catalog SA-5900, with complete data on all Reznor heaters. Or write Dept. 4-H, Reznor Manufacturing Co., Mercer, Pa.



REZNOR HEATERS

"WORLD'S LARGEST SELLING DIRECT-FIRED HEATERS"

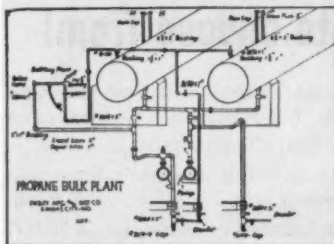
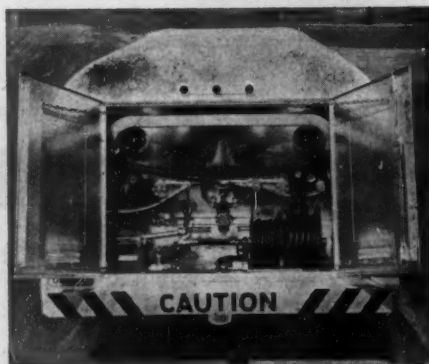
**Your One Supplier with everything in L.P. gas
and Anhydrous Ammonia Equipment**



"The Loadmaster" LPG Truck Tank



PASLEY-DESIGNED Truck Tanks (see above and right) were first to feature all controls from one location. All operation is from one point—rear compartment.



BULK PLANTS Pasley LPG and Ammonia type installations—a turnkey job or engineering for your own installation. Write, wire or call.

Also a complete line of accessory equipment.

"Pastels By Pasley"

COLOR—The Modern Trend! Bring your LPG Equipment up to date. Available in the following colors . . . (write for information)

Blush Peach	Smoky Grey
Sunshine Yellow	Seafoam Blue
Mustard Lime	Wedgewood Green
Eureka Orchid	Rose Beige
Lake Blue	Desert Rose



EVERYTHING IN LPG AND ANHYDROUS AMMONIA

The Pasley Mfg. & Dist. Co.

1111 East 11th Street • Kansas City, Mo. • Tel. Victor 2-2369

Back Talk

of our industry. This article, along with your article in Beyond the Mains, has had much desirable effect.

The board of directors of the Texas Butane Dealers Association voted that the association should get behind this project, and as a result, Bill Lawson and the president of the TBDA, along with several directors, came to Plainview on July 29 to develop these plans along with Dr. Longnecker.

Again, I want to thank you personally for the good work you have done in presenting this project to the attention of the butane dealers group throughout the nation. Truly this is one of the biggest loads that the butane dealers can look forward to, and for personal and selfish reasons, I am going to spend much time and money to develop this as quickly as research will permit.

W. R. TAYLOR
MANAGER
Gene Bumpus Inc.

Wanted: a correspondence course

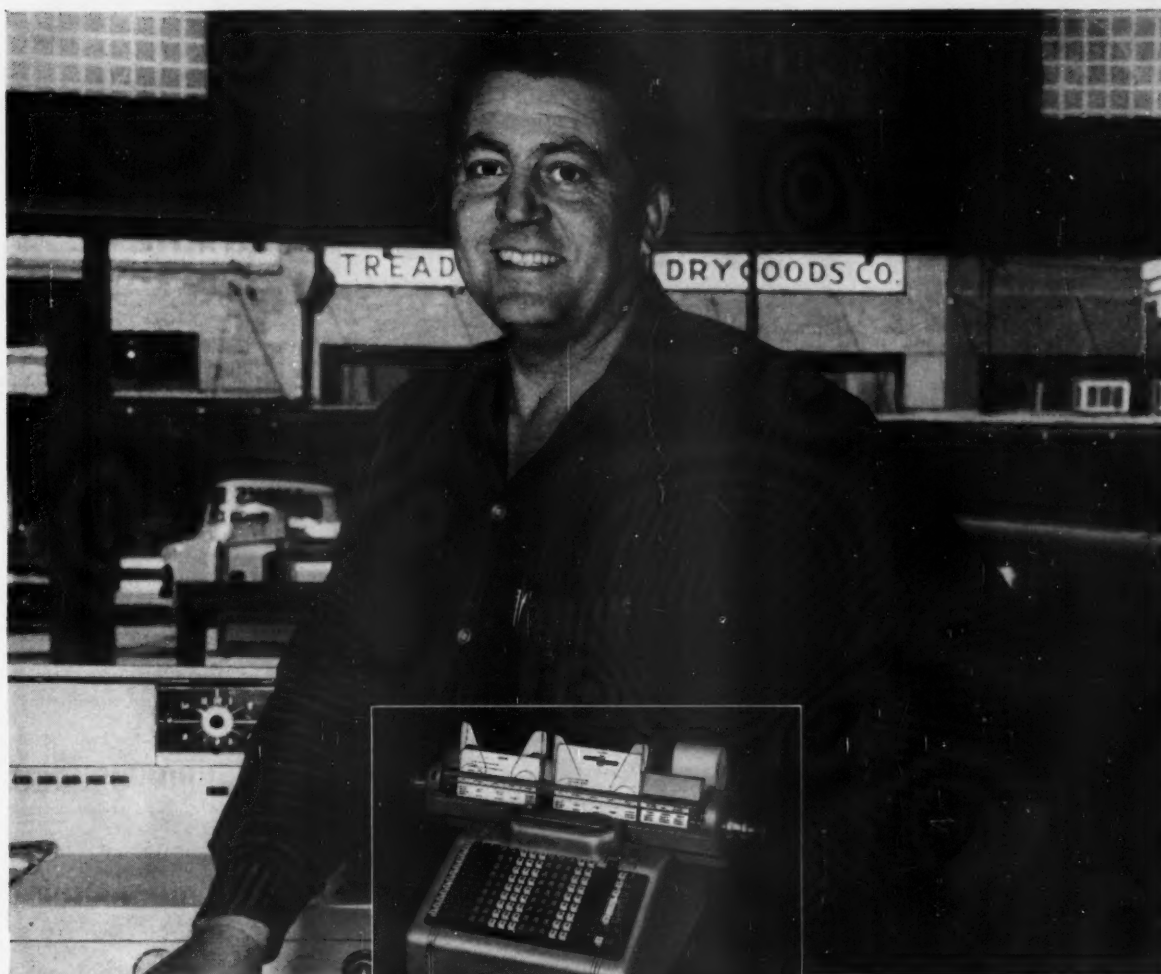
Kingston, Jamaica

Would you kindly inform me if there is at the moment a school through which we can obtain a correspondence course in L.P. gas? In 1950, I was then employed by Esso Standard Oil. I started a course from the Institute of L.P. Gas, Tulsa, Okla., but it wasn't completed. At the moment I am employed by the Tropical Gas Co. and would like to complete same. I have written to the institute but the letter returned unclaimed. Do you know of any school? Please oblige.

C. A. MCKENZIE
Tropical Gas Co.

The Liquefied Petroleum Gas Association has developed a course titled "LP Gas Service Training Course." It is very comprehensive, and I should imagine is just the sort of thing you are looking for.

I suggest that you write to the LPGA for further information on it. The address is 11 So. LaSalle St., Chicago, Ill.



V. H. Arnold, Manager

BURROUGHS EQUIPMENT SAVES \$2800 PER YEAR ON ACCOUNTING COSTS

The scene: Lyons Butane Gas Co., Inc., Alto, Texas. **The jobs:** accounts receivable (including customer billing), accounts payable, general ledger work. **The equipment:** one Burroughs F-100 Accounting Machine. **The results,** in the words of Manager V. H. Arnold: "This equipment so adequately absorbed the paper work for a 20% increase in accounts that the need for an additional clerk has been eliminated. The general ledger figures it provides as a by-product of account posting give us an accurate, up-to-date picture of our business every day. With this information we are able to evaluate and improve customer service." Burroughs—TM

Lyons is one of many gas dealerships helped to new accounting efficiency by Burroughs office automation equipment. For details, action—and results—call our nearby branch now. Or write Burroughs Corporation, Detroit 32, Michigan.



**Burroughs
Corporation**

"NEW DIMENSIONS / in electronics and data processing systems"

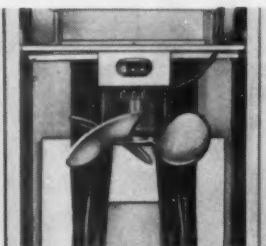


Wall heater profits start in the home, with

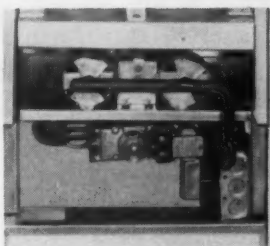
suburban® Counter-Flo

Suburban engineers have thought of everything it takes to provide maximum trouble-free heating comfort that builds satisfied customers for you. First is the unique air circulation. Counter-Flo heats floors *first*—by drawing cool air in at the top, warm air out at the bottom, thus creating near-perfect room temperature from top to bottom due to superior air-circulation.

The Suburban Counter-Flo gives you this superior air-circulation with a permanently sealed fan motor mounted in top of forced air models. The fan pulls cool air in at top, forces heated air down and out at the bottom. The motor never needs oil or attention.



Suburban Counter-Flo controls are properly wired and aligned at the factory to insure maximum efficiency. No separate controls packages to lose or become separated. Makes heater installation a quick, easy operation.

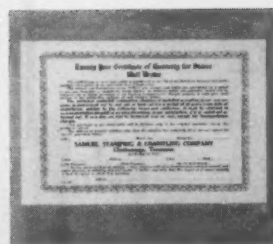


And your room temperature stays at the desired level—automatically with the Minneapolis Honeywell Wall Thermostat. Keeps room comfortable yet never overheats, assuring big fuel savings.



20 YEAR GUARANTEE

The combustion chamber in the Suburban Counter-Flo is guaranteed not to rust or burn out for 20 years after installation. The heat exchanger is electrically welded, porcelain enameled inside and outside, and pressure tested to insure against leakage.



L. P. Dealerships Open

With Suburban you get: (1) superior design and looks, (2) exclusive Counter-Flo comfort, (3) 20-year guaranteed combustion chamber, (4) a complete line of gravity or forced-air wall heaters—available in single or dual wall models, from 18,000 to 50,000 BTU, also gas fired full-automatic floor furnaces at the right price, (5) free displays and merchandising aids. Get the full story from your Suburban distributor today.

Samuel Stamping & Enameling Co.
Dept. BPN — Chattanooga, Tennessee

Yes, I would like more facts on Suburban wall heaters and floor furnaces. At no obligation:

- ☐ Please send representative
☐ Please send literature

Name _____

Address _____

City _____ State _____

suburban®

Built-Ins

Wall Heaters • Floor Furnaces • Ranges

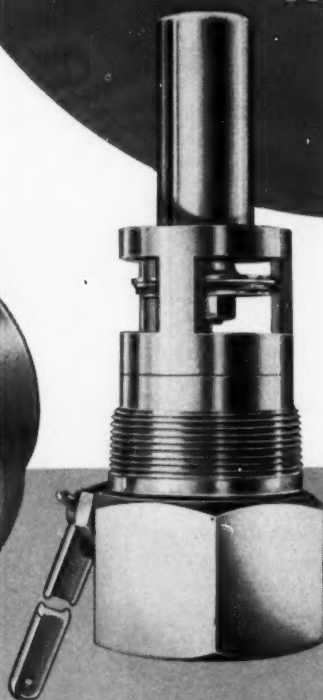
Never

Before...

**SO MANY
SAFETY FEATURES
PROVIDED ON
INTERNAL PRIMARY
SHUT-OFF
VALVES**



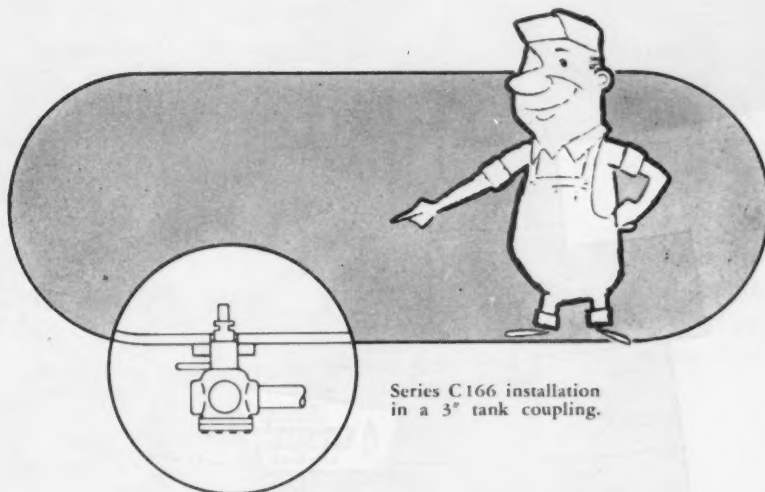
Series C166
with integral strainer



Series C154

**VALVE
CANNOT
DISCHARGE
TO AN OPEN
LINE**

Write today for complete information about this outstanding new development.

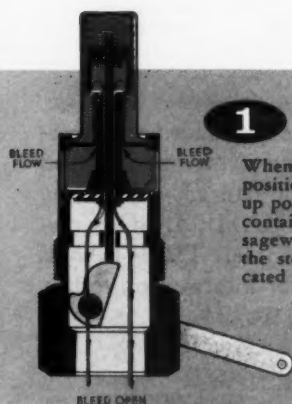


Series C166 installation
in a 3" tank coupling.

High Capacity Liquid Discharge and Filling Valve for ASME Bulk Truck or Storage Tanks

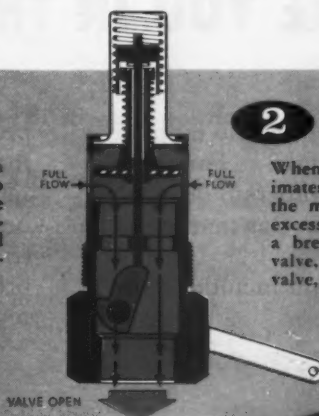
For the first time in the LP-Gas industry, a completely internal primary shutoff valve and excess flow check valve for use in withdrawing liquid or filling ASME containers—truck, semi-trailer or bulk storage tanks. The only part of this valve outside the container is the outlet connection. Even if an accident should shear the outlet connection, a gas-tight seal is maintained, or if at time of accident the valve is open, the main valve

will automatically close, preventing discharge of gas. Main valve opens only when pressure on the outlet side of the valve approximates the pressure on the inlet side. The hazards of opening a valve to an open line are eliminated. Because the shut-off mechanism is completely enclosed, accumulation of sludge or silt in the operating portion of the valve is prevented.



1

When valve lever is moved to open position, cam forces valve stem into up position, allowing liquid inside container to bleed through a passageway between the valve stem and the stem guide. This flow is indicated by arrows.



2

When downstream pressure approximates pressure inside the container, the main valve is opened by the excess flow spring. Should there be a break in the piping, the main valve, acting as an excess flow check valve, will close.



FISHER GOVERNOR COMPANY Marshalltown, Iowa

SINCE 1880



ARE YOU IN THIS AREA?

If you are in the area shown on the map, or on the fringe, you, too, may take advantage of Sinclair's Truflame LP-Gas program designed to make more profits for LP-Gas marketers.

Sinclair's expanding program includes more

product, faster delivery, experienced engineering service and a complete advertising and merchandising plan. You can grow faster by being a Sinclair TRUFLAME LP-Gas distributor and using the complete TRUFLAME program. Write or call for information today.



Wisconsin-Illinois
Sales Office
Clearbrook 9-0290
Arlington Heights, Ill.

Sinclair

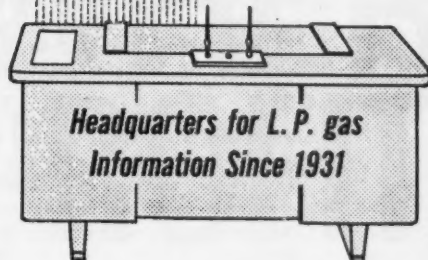
SINCLAIR OIL & GAS COMPANY

LIQUEFIED PETROLEUM GAS SALES DEPARTMENT
SINCLAIR OIL BUILDING • PHONE LU 4-0411 • TULSA 2, OKLAHOMA
NORTHEAST SALES OFFICE • REgent 7-3332 • HARRISBURG, PA.



BPN

Information Desk



Rules and regulations for cylinders and systems covered in Pamphlet 58 . . . The amount of heat needed to melt nickel . . . How to calculate the flow of gas through an orifice.

Formula for calculating gas flow through orifices

Washington

Recently we had an occasion to drill a blank orifice requiring 100,000 Btu input on straight propane.

We happened to notice the following and would appreciate any information on why the great difference.

	Drill Size	Btu's
Handbook BUTANE-PROPANE Gases	31	100,600
Practical Guide to LP Gas Utilization	32	100,900
Anderson & Forrester (drill mfg's)	37	98,650
Another orifice chart (source unknown)	40	99,150

T. D. A.

The basic formula for calculating the flow of gas through an orifice to a burner is:

$$Q = KA \sqrt{\frac{h}{s}}$$

Where

Q = Cubic feet of gas flowing per hour through the orifice.

K = A constant which includes the orifice discharge coefficient with other constants pertaining to the units employed.

A = Area of the orifice in square inches.

h = The gas pressure in inches of water.

s = The specific gravity of the gas referred to.

air = 1.

The factor K for the more common types of orifices having an angle of

approach of 12 deg. to 60 deg. is about 1330, or a little more in the larger orifices (No. 40 and larger). The coefficient of discharge varies with the size of the orifice, the design of the orifice and other items affecting the flow.

The quantities of flow agree between the Handbook and the Practical Guide. I find that these quantities are close to the values in tables in the American Gas Association handbook "Gaseous Fuels" as well as other tables which I have.

I do not know why the values in the last two tables you mention are so far from those in the handbooks. They may include conditions of design, specific gravity and other factors that differ from those used in the basic formula.—Ed.

Pamphlet 58 always needed

Ohio

One of our overseas customers has asked us to locate an instruction book covering the operation and maintenance of twin-barrel delivery trucks. He is also looking for some publication relating to the proper filling procedure of domestic systems and cylinders.

C. K.

There is no publication as such which we know about containing instructions for the operation and maintenance of twin-barrel delivery trucks.

Our suggestion is to obtain operating and maintenance instructions from the manufacturers of the various components on the vehicle such as the pump, meter, special valves, etc.

The National Fire Protection As-

sociation Pamphlet 58 has rules and regulations which cover the proper filling of cylinders and domestic systems. The NFPA address is 60 Battery March St., Boston.—Ed.

Furnace temperatures for melting, pouring nickel

New Jersey

Can you give us the gallons of propane needed to melt 500 lb of nickel in a melting pot at 3000 deg. F.?

A. W. E.

It does not require much heat to melt the nickel. More heat is required to heat the metal to the melting point and from the melting point to the pouring or processing temperature at about 2850 deg. F.

The latent heat of fusion for nickel is 130 Btu per lb. Therefore, it requires only 65,000 Btu to melt the metal after it has been heated to its melting point at approximately 2650 deg. F. It requires about 376 Btu per lb to raise the temperature of the metal from 60 deg. F. to the melting point and then raise the temperature of the liquid to 2850 deg. F. It then requires 65,000 Btu plus 188,000 Btu or 253,000 Btu to melt and heat the 500 lb of nickel to the pouring temperature. This in itself does not require much heat—a little under three gal. of propane.

The problem is in the high temperature that is needed to melt the metal and raise it to the proper temperature for pouring. The products of combustion formed from the combustion of gas and cold air will carry approximately 77 per cent of the heat released by the fuel from the fur-

"Frequent check-ups on bulk plant operations pay off in reduced operating costs..."



says Bob Murphy
Tri-State Propane Gas Company
South Sioux City, Nebraska

"I have found that it pays to take a close look, periodically, at my bulk plant operation, and this is when I really appreciate Union Texas Natural's engineering department. These specialists spend 100% of their time on LP-gas engineering and I've found that they have a ready answer to even the most difficult technical problems."

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- the complete service required to work out the design and installation of new equipment . . . or to remodel existing facilities

Call Union Texas Natural for expert advice and assistance in making the changes in operations that will mean more profits to you. Our engineering specialists will be glad to visit you at your convenience.



UNION TEXAS NATURAL GAS CORPORATION
ENTERPRISE BUILDING TULSA OKLAHOMA



Information Desk

nace. This leaves only 23 per cent of the available heat in the furnace. The above figures are based on a theoretically correct mixture of gas and cold air. Generally, the maximum flame temperature is attained when the fuel is burned with a slight deficiency of air. Although this may not release all the energy in the fuel, the high temperature of the flame is desirable to transfer heat to the charge.

There are other items which divert heat from where it is desired to go. The furnace walls absorb the heat; some is lost through the walls, some by direct radiation through cracks and openings, and some by convection.

The above rather lengthy discussion of heat loss is included to give some idea as to why it is difficult, if not impossible, to reach certain high temperatures in commercial furnaces when literature indicates that theoretical flame temperature for certain fuels is around 3400 deg. F. or 3500 deg. F. The American Gas Association handbook, "Gaseous Fuels," lists maximum flame temperatures for propane and butane as follows:

	Observed deg. F.	Calculated deg. F.
Propane	3497	3573
N. butane	3443	3583
Iso-butane	3452	3583

Note the considerable difference between observed and calculated temperatures under ideal conditions of laboratory testing.

High temperatures, in the order of 3000 deg. F., are best obtained by preheating the air for combustion. In large furnaces, this is done by transferring heat from the hot waste gases to the incoming combustion air through regenerators, recuperators, economizers, etc. In small high-temperature furnaces, the air may be preheated directly by a gas-fired air heater. The preheated air raises the flame temperature and thereby increases the furnace temperature. The high furnace temperature is needed during the melting and super heating period to provide sufficient temperature differential to transfer heat to the charge. Insufficient furnace temperature will delay the melting and final heating rate and thereby increase the fuel consumption. The efficiency drops off rapidly with inadequate furnace temperature. A combination of adequate heat input, and furnace temperature to produce rapid heat transfer and heating of the charge is essential for efficient melting.—Ed.

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SUPER MILEAGE LUG*

*FIRESTONE T.M.

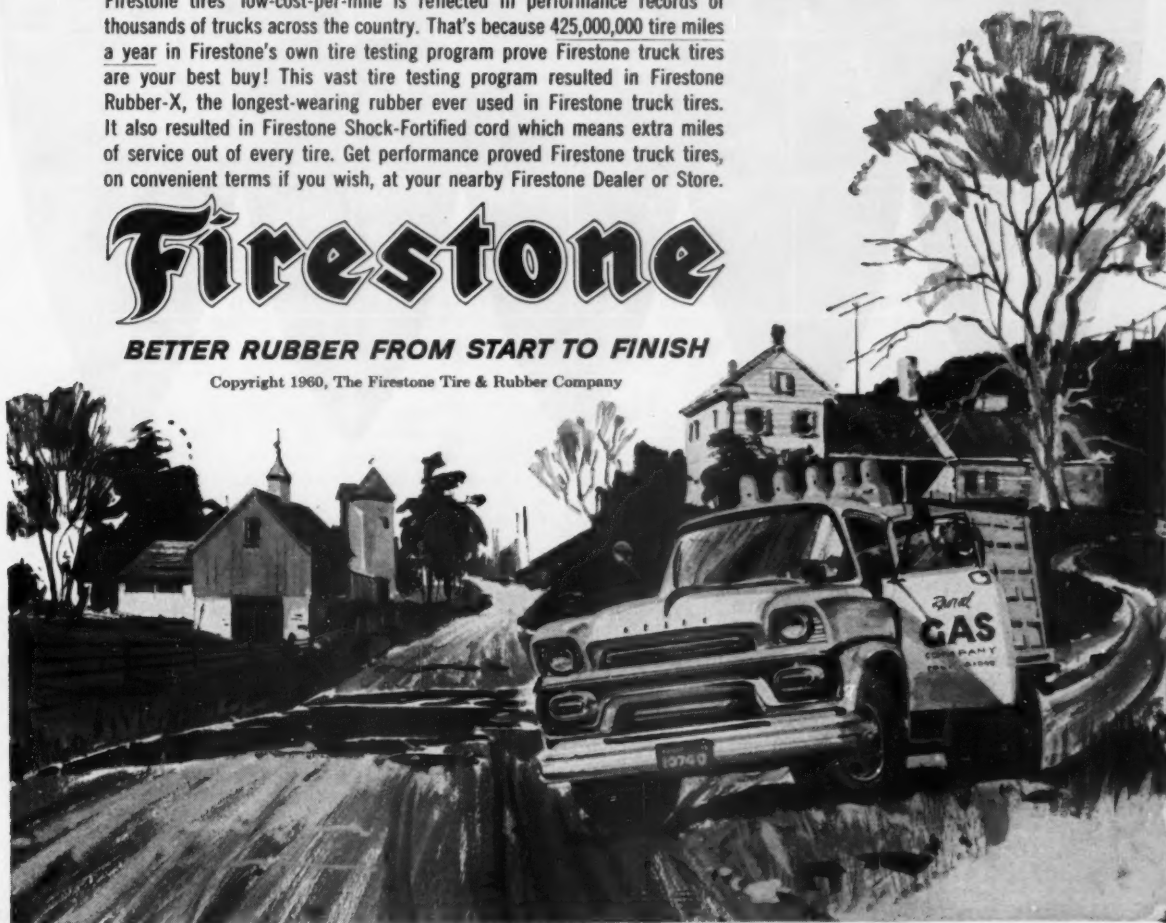
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Performance makes the world of difference



Fig. 8102—bronze LPG globe valve. Union bonnet; special composition disc; regrindable, renewable nickel-bronze seat ring.

Fig. 86196—steel LPG horizontal lift check valve. Special composition disc, stainless steel spring, guided disc holder, renewable nickel-bronze seat ring.

Fig. 8375—bronze LPG gate valve. Union bonnet; integral seats. Accurately guided nickel-bronze solid or double wedge discs are interchangeable.

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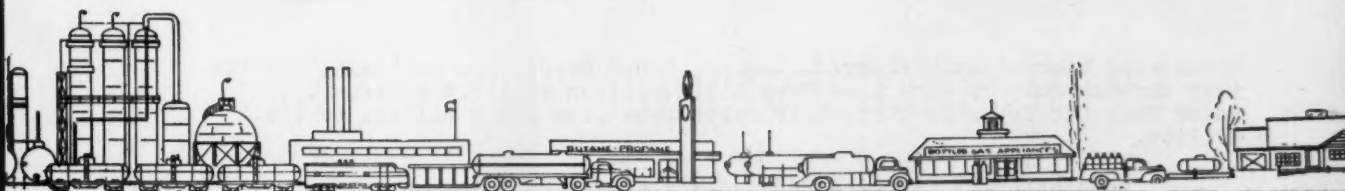
Powell LPG valves are available in bronze globes, angles, gates, checks . . . and in steel globes, angles, checks—all for 400 pounds W.O.G. Call your nearest Powell Valve distributor (there's one in every city). Or contact the Wm. Powell Company direct.

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HIGHLIGHTS

BPN



Flame Cultivation Progress--Flame cultivation pioneer J. W. Gotcher reports: "Extremely bad weather and a great deal of plant disease (caused by too much rain) upset many of our plans for this year. We had to change our approach considerably, but the outcome has been much better than many thought possible. This resulted in three major accomplishments:

"First, quite a number of farmers will incorporate flame cultivation in the coming year and 1962 will be the year when it will take off in a big way.

"Second, for the first time, research on the experiment station level is being done. Some published work on flame weeding now contradicts other information that appears equally reliable. Soon, we will release information that will justify flame weeding of onions and Irish potatoes on a wide scale. Further research--a year's work--will prove results on other crops--such as sugar beets and carrots.

"Third, wide interest has been created among major producers and distributors of LPG. A number are asking for help to set up programs to interest dealers and farmers. Many inquiries come from larger bulk plant operators in every section of the nation. The Texas Butane Dealers Assn. is making flame cultivation their major project for the coming year and the LP-Gas Council is going to promote it on a national scale."

California Pioneers--The pioneering spirit is not dead in Fresno, Calif., where local dealers have succeeded in opening the town to LPG after ten years of trying. Much credit must go to dealer Henry Haar, who three years ago succeeded in placing an LPG-dispensing unit on municipal property and converting four city trucks. After two years of trouble free service, the city fire marshal asked for a model ordinance. It was unanimously passed last June, making it legal to sell, transfer, and store LPG in Fresno.

Chicago's Propane Buses--In June, Highlights discounted rumors that propane buses were on their way out of Chicago. The just-published Chicago Transit Authority annual report presents the true status of the propane bus in Chicago: last year, propane buses traveled 53.9 million miles, nearly 2½ times farther than the nearest competitor, diesel buses; propane buses were the only new surface equipment acquired in 1959; at year's end, CTA had 1448 propane buses (out of 3274 pieces of surface equipment) or more than any two of its three competitors (gas, diesel, electricity).

GAMA's General Business Outlook--Reflecting the disappointing showing of the nation's economy, gas appliance and equipment sales during '60's first six months were 8.7 per cent below '59 figures. Happily opposing the trend with increases were: built-in ranges, boilers, conversion burners, incinerators, unit heaters, and duct furnaces. Sales for the second half are expected to be "somewhat greater," but not enough to bring '60 sales to '59 levels. Sales in '61 should increase 5.1 per cent over 1960. Substantial increases are looked for in all appliances except free-standing ranges, floor furnaces and unit heaters.

Manufacturers' Sales Reports--Caloric Appliance Corp. says sales for the fiscal year ending June 30 were the highest in history and July sales were up 10 per cent over last year...Maytag Co. says first-half sales declined six per cent from last year's record highs but--at \$59 million--are still

Continued on next page

Continued

HIGHLIGHTS

the second highest in history....Geo. D. Roper Corp. says net sales for the year through July 16 were down from \$16.3 million to \$13.9 million.... Union Tank Car Co. says first-half sales rose from \$48.2 million to \$55.1 million.

Manufacturing Changes--Bastian-Morley Co. has stopped making water heaters under the "Crane" brand name, will now market them exclusively under its "Basmor" label....Linde Co. on Oct. 1 will cease cylinder production and will sell its cylinder-making equipment to Newark Steel Drum Co., Inc. which has formed Cylinders, Inc. in Linden, N. J.

Manufacturers' Expansions--Cleaver Brooks Co. is expanding its packaged boiler production facilities in Stratford, Ont., 25 per cent....Dearborn Stove Co. on Jan. 1 will break ground for a \$1.5-million, 225,000-sq.-ft. manufacturing, warehousing, and office facility in Dallas....White-Rodgers Co. has bought the Burner Division of Configured Tube Products Co.

Marketer Mentions--Propane Industrial Service Inc., Willoughby, O., has purchased Fuelgas Co., Hudson, O....Suburban Propane Gas Corp., Whippany, N. J., reports first-half earnings were up 14 per cent to a record \$1.2 million....Southeastern Public Service Co., New York-based firm whose subsidiary is Florida's largest LPG marketer, went on the New York Stock Exchange in late July.

Association News--Northeast LPGA will hold its annual convention in conjunction with the AGA convention in Atlantic City, Oct. 10-12; has--after considerable study--moved its 1961 convention and exhibit date up to Feb. 6-8 (in Washington) to present first-of-the-year developments while they are new....Dakota LPGA district has--with the aid of a good safety record--succeeded in reducing dealer liability insurance rates 50 per cent....Oklahoma LPGA's ruling against wire braid hose (August Highlights) covers only in-plant use....Texas Butane Dealers Assn. reports \$348,000 of equipment sold during its recent convention.



CURRENT L. P. GAS & L. R. GAS PRODUCTION & INVENTORIES (A. P. I. figures - in thousands of gallons)

	Propane	Butane	Bu-Pro Mix	Iso- Butane	Other Mixes	Total LPG	Total LRG
Production (U. S.)							
July '60.....	291,679	158,330	57,231	51,399	67,624	626,263	277,553
July '59.....	279,862	163,178	62,840	54,774	65,256	625,910	240,989
'60 to date....	2,444,276	1,267,029	376,182	401,733	477,647	4,966,867	1,866,236
'59 same period	2,130,187	1,195,718	424,309	361,089	409,875	4,521,088	1,604,313
Inventories (7-31-60)							
Zone A.....	12,264	2,458	15	—	10	14,747	16,859
Zone B.....	60,771	3,393	284	943	963	66,354	15,119
Zone C.....	69,414	38,199	473	5,213	30	113,329	13,765
Zone D.....	98,058	10,875	12,972	1,044	174	123,123	704
Zone E.....	123,368	204,333	989	25,888	2,500	357,078	54,120
Zone F.....	244,061	102,686	902	9,307	55	357,011	1,829
Zone G.....	5,929	836	8,915	—	46	15,726	974
Zone H.....	944	334	165	221	17	1,681	26,524
U. S.....	614,809	363,114	24,715	42,616	3,795	1,049,049	129,894
U. S. (7-31-59)	649,818	233,986	30,738	53,812	15,351	983,705	117,888

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area heating
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A horizontal furnace should be compact for ease of installation . . . it should be efficient and quiet for customer satisfaction. Dearborn's new horizontal is!

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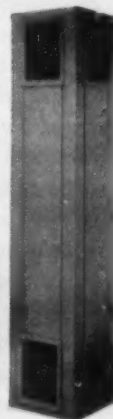
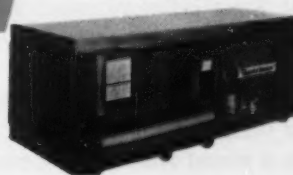
Your Dearborn representative will call on you soon. Take just a few minutes for a more detailed presentation of a product line and a selling program which has you and your profit-picture in mind.

Dearborn Vertical

BTU input 35,000 and 50,000 in two models for 1960. Ideal for apartments, small homes and multiple unit installations . . . as well as zone heating in larger homes.

Dearborn

Horizontal Four models available in 1960, with BTU ratings of 80,000, 100,000, 120,000 and 150,000. All fit and heat efficiently on attic platform or in crawl space under the floor.



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ACF T-1 BONUS BLIMP LP GAS ANHYDROUS AMMONIA TRANSPORT MORE CAPACITY PER POUND PLUS BONUS FEATURES AT NO EXTRA COST!



1. **One-piece flued manway** with hinged cover makes access easier, makes cleaning, maintenance and inspection more economical.

2. **Tank calibration** assures accurate capacity. Tanks are water-gauged and certified to within three pints, using methods established by U. S. Bureau of Standards and approved by ICC and AAR.

3. **Recessed gauges** and valves assure safety... can't be broken off in any accident or mishap.

4. **Lightweight "Sigma" baffles** are scientifically designed to prevent surging, give easy access to interior, do not add excessive weight, are easily removable.

5. **One-third less welding** in three-piece sectional heads minimizes areas of stress concentration.

6. **Engineered to prevent obsolescence:** four-inch flanged liquid

outlet connection is designed to permit unloading at rates in excess of 250 gallons per minute.

7. **Other features** include spray filling... steel-grit-blasted surfaces internally as well as externally... complete fabrication and stress relieving facilities in one plant, under one roof.

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WASHINGTON REPORT

by NEIL REGEIMBAL, *Washington Editor*

★ New administration means a new America

A new America will emerge next January. A new administration with new policies and new attitudes will have a deep impact on all business. Changes will be sharper if Kennedy and the Democrats take over the White House as well as the Congress. But, Nixon and a new GOP administration will also depart from courses charted by President Eisenhower. One result of the bitter election battle may be increases in government spending and taxes—to fulfill campaign promises.

★ Tax reform will come

Tax reform in the next year or two is a sure thing. But higher overall taxes are more likely than tax cuts. The outlook for changes in the cooperatives' tax loophole is good. (Details page 88.)

★ Depreciation survey to help

Businessmen will have a chance to speak out on what changes are needed in tax depreciation laws. The Treasury Department is sending questionnaires to almost 10,000 companies asking about present policies of depreciating equipment and facilities and what changes are needed. Results of the survey will shape the government's recommendation to Congress during tax overhaul studies next year.

★ Government could control LPG shipments

A measure clamping tight federal controls over private shipments of "dangerous" articles (including L.P. gas) was in a nip-and-tuck battle as Congress wound up its pre-convention session. It had passed the Senate and was awaiting House action. (Details page 88.)

★ Help coming for dislocated businesses

Small firms dislocated by the new federal-state highway building program or by urban renewal programs will get special help from the Small Business Administration. SBA will give "immediate priority" to loan applications from such firms. The agency will also consider a one-year grace period during which no payments would have to be made on the principal. A staggered repayment plan would allow smaller payments to be made in the early years. These firms will still have to meet normal requirements for SBA loans or SBA bank participation loans.

★ U. S. Consumer Department not dead

Efforts to create a U. S. Department of Consumers didn't win much support in Congress this year, but the issue is by no means dead. Proposals will be renewed next year. Brief hearings were held on the eve of the Senate's convention recess on a bill introduced by Senator Estes Kefauver (D.), Tenn. It calls for a full department with power to review and investigate price changes by manufacturers, wholesalers and retailers and the power to evaluate product suitability and quality.

★ Construction coming up

Conservative government forecasters are finally agreeing that a fall spurt in home building is likely. They also are predicting that total construction outlays of all kinds this year will match last year's strong showing.



CUTS YOUR RED TAPE!

Let's face it — There are many time-consuming, profit-robbing extras in an LP-Gas operation — RED TAPE!

Tuloma is eliminating these headaches with its first-of-its-kind automatic billing.

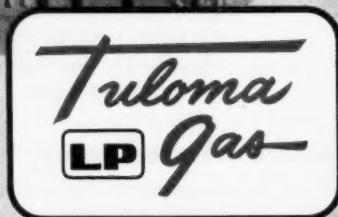
This unique business machine, designed especially for the LP-Gas industry, types automatically, makes complicated calculations, and records all accounting data on IBM punch cards ... handling an entire billing operation at 100 words per minute. As a result, you get **only** the invoice information you need, quickly, efficiently.

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Beyond the Mains

By WILLIAM W. CLARK • Editor



Tax equality—or "punitive taxation"?

WASHINGTON OBSERVERS are pretty well agreed that with a new administration, whoever it is, we are in for some tax "reform." Our Washington editor shares that view (see page 21). He also thinks the chances of REA co-ops being a target in this reform are good.

We wish we could be as optimistic. The Democrats, in the platform adopted at Los Angeles, were very specific in stating their intentions of maintaining the tax-free status of the co-ops. The plank reads, "We will protect co-operatives from punitive taxation."

Now what is one man's idea of "punitive taxation" is another man's idea of "closing a loophole" in our tax laws. The Democrats *do* propose to "close the loopholes . . . by which certain privileged groups legally escape their fair share of taxation." Who are these "privileged groups"? The platform answers that question this way: "Among the more conspicuous loopholes are depletion allowances which are inequitable, special considerations for recipients of dividend income, and deductions for extravagant 'business expenses' which have reached scandalous proportions."

Now those "recipients of dividend income" might be REA co-op members, in the eyes of the platform writers, but on the basis of their past statements on the floor of Congress, we seriously doubt it. Somehow such a view doesn't square with the platform's general attitude toward the REAs. For example, "We will maintain interest rates for REA co-ops and public power districts at the levels provided in present law." "The Democratic Congress has successfully fought the efforts of the Republican Administration to cut off REA loans and force its high interest rates on this great rural enterprise." "We will encourage agricultural cooperatives by expanding and liberalizing existing credit facilities if necessary to assist them in extending their marketing and purchasing activities."

Does that sound as if a Democratic Administration would make any serious moves to tax the profits of these "non-profit" concerns? That would hardly be in keeping with the "encouragement" the Party is promising them.

No, it looks as if your subsidized competition will continue to escape taxation. It will also grow bigger ("The Democratic Administration will . . . foster the development of efficient regional giant power systems . . .").

Obviously, all this comes about because the REAs have a "voice" in government. Incidentally, coal too has a voice. "We support the establishment of a national fuels policy," reads the platform. If coal can't survive as an equal competitor, the government proposes to step in and force its usage in certain markets.

But you have been overlooked. If you got any tax breaks, you would probably be viewed as a member of a "privileged group."

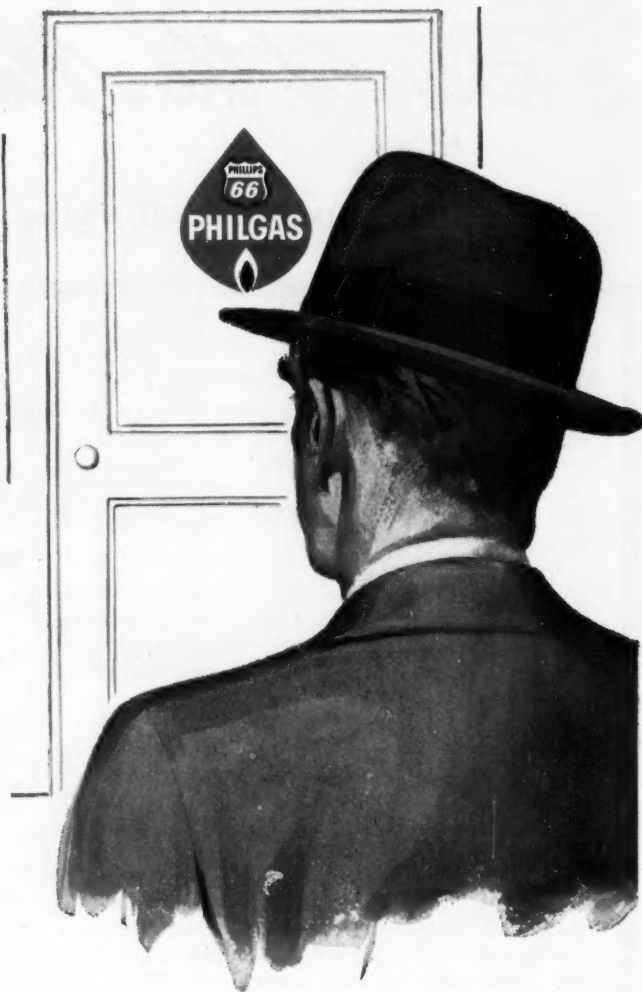
Such are the inequities of politics. Your voice, multiplied by only a few thousand, is drowned out in the din of the voices of the numerically superior groups—including the REAs.

Well, if you're a Democrat (as most people are today), it's your Party. You deserve to be heard. And you *can* be heard. Earlier this year, the "proprietary" segment of your national association made a plea for tax equality. This was helpful. But as Washington editor Neil Regeimbal pointed out in his article last January ("Get Active in Politics!"), "an association can't do much more than try to offset other opposing associations unless the politicians know there are workers in the precincts and wards back home who are thinking the same way."

If your voice in the local precinct proved persuasive, it might be multiplied many times by your precinct co-workers. Then it would be further multiplied in every precinct throughout the land, swelling into a chorus that might, someday, impress a Congress that at the moment couldn't seem to care less. ■

(What's back of the Philgas symbol is what counts!)*

Doorway to a Successful Future....



THE NEW PHILGAS SYMBOL on the door represents the bright future ahead for Philgas branded distributors. Come in and get acquainted.

As with any other brand, it's what is back of the symbol that counts. You, as a Philgas distributor, will be backed by the industry's most successful program for getting and keeping business.

As a Philgas branded distributor, you can be identified with the largest selling national brand, and can reap the harvest of expertly planned national

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Ed Thronson, chairman, directs the Board of Directors meetings, as pictured here. From left to right are Al Anton, Jack Douglas, John Agbashian, Ross May, Ed Thronson, and Jim Fosmire. Members not present are Charles Cavanaugh, Mrs. Gussie Spears, and Maris Ward.

Group strength plus dealer independence—that's

The story of Pacific Delta

In an era when company after company has found it advantageous to consolidate with its fellow dealers into giant LPG combines, one steadily expanding group of dealers has proved it can compete—under a group arrangement—without any loss of dealer individuality or independence.

The group is a tightly knit organization of some 38 dealers, who call themselves—collectively—Pacific Delta Distributors.

A BPN Exclusive

THE MAIN PROBLEM a small company must face in competing with a big one is simply this: How can I buy cheaply enough to be competitive? Cooperative buying is one answer. It was this answer that was the keystone in the original Pacific

Delta structure. While today the headquarters staff performs many other functions for the members, group buying power is still the central feature of PD's functions.

Today, PD serves member companies in California, Nevada, Oregon, and Utah. It has come a long way, in just 13 years, from its birth as a dream in the mind of the late Bill May of Maco, in Lodi, Cal. May had seen the workings of a growers' buying organization in his

own market area; he felt that the same purchasing concept could be applied to the L.P. gas business. It had never been tried before, to his knowledge; nor, to our knowledge, has it been duplicated elsewhere. But it could well serve as a model for other dealers in other areas throughout the nation.

It was not easy to get Pacific Delta off the ground. May and other founders had to work hard to get potential members to accept the idea of joint action. LPG men are individualists, and are suspicious of group activities.

The group started small, as a result. Originally it included dealers from only northern and central California. Its rate of growth was small, too, but in recent years it has been accelerating. Today, it has members in four states.

For a time, ownership was closely restricted, and a number of dealers who bought from PD were not shareholders. A year ago, through



Ralph Weaver is president and manager of the Pacific Delta group.



Tireless committee work has been one of the keys to the success of Pacific Delta Distributors. Pictured in a "bull session" following a two-day meeting in Sacramento, PD members from left to right are: John L. O'Brien, Lassen Gas Co., Redding; George Myers, Lovelock (Nev.) Gas Co.; Al Kamps, Kamps Gas Service, Ripon, Cal.; Bert Pressley, Rotary Sierra Co., Sacramento; Ross May; Frank Platts, San Luis Butane Service, Atascadero, Cal.; and Keith Horning, Nevada Gas Service, Winnemucca, Nev.

a reorganization, these companies were permitted to join through stock purchases.

Pacific Delta has no heavy operating assets—no stores, no plants. It has a modern office building and warehouse in San Jose, Cal., to house the staff and merchandise.

The principal function, group purchasing, is carried on by the staff under the direction of the board of directors and the appropriate committees. Fuel purchases are negotiated with the suppliers, an arrangement which gives the members a distinct price advantage.

Each member company does its own hauling, with its own transports—if it owns any. It also takes delivery direct, from a conveniently located refinery or natural gas plant. However, all billing under the fuel contracts is done by Pacific Delta Distributors. Stringent credit rules are enforced; members' accounts are on a 30-day (cash) basis.

Aside from the billing, then, product movement is handled individually. But when necessary, members can, and do, help each other to even out supply and demand. If one member has an oversupply of product, his purchases can be diverted to another dealer who is faced with

a shortage. Thus all dealers' fuel rations are improved. In the winter this flexibility is particularly important. All told, members own among them 21 transports; in critical cold weather periods, this fleet can be juggled to serve the entire organization.

Pacific Delta members also buy appliances and equipment through the central organization. Deliveries are generally made direct, with some warehousing. Buying preferences are respected, but, obviously, it is to the dealer's advantage to participate in carload lot buying whenever possible.

It's interesting to note that PD does not bypass equipment and appliance distributors. Instead, the organization buys from them, just as any individual retailer would do; the only advantage offered the member, then, is the quantity discount.

Central buying offers some benefits to suppliers, according to the Pacific Delta staff. Their salesmen can reach 38 dealers, with 48 plants, by contacting a single location. This also saves the members time that would have been taken up with salesmen's calls. (Of course, there is nothing to prevent a manufacturer's representative from practicing

salesmanship at the local level, too!)

In this sort of setup, it is important that a central staffer be out in the field frequently, instructing individual dealers on new appliances and new equipment, helping them plan their promotions, etc. This is done by Jack Logan, assistant secretary-treasurer, who is also a combination salesman and public relations man. Most of the time he is on the road, acting as liaison with the dealer members, and soliciting new members.

Under this same contact program, Pacific Delta retained the services of an advertising agency that already had experience in the LPG field. The agency, Robert Podesta & Associates, San Jose, developed a trade name for the product handled by Pacific Delta members—"Delta L.P. Gas." Podesta also created a continuing advertising and customer relations campaign that puts to work the best suited tools of the advertising profession.

Monthly merchandising bulletins are sent to the membership to keep them informed on new developments that might fit into their merchandising activities. A cooperative arrangement has been worked out with other members of the gas industry to share promotional ideas and short cuts in the production of advertising materials.

Members may use Podesta's services or not as they like. They may develop their own individual programs. What they do to sell, advertise, and promote locally is their own business. But there is a definite saving in using materials developed cooperatively, and the impact of the messages is enhanced by repetition throughout the group's combined territories.

Parenthetically, since its beginnings as an organization, Pacific Delta Distributors has participated in the L.P. gas industry's promotion efforts. Members continue to serve as officers and on the committee of the Western L.P. Gas Association and the National LP-Gas Council. As a result of staff work, bringing about a closer working unity between the L.P. gas dealers and the manufacturers of gas appliances, Pacific Delta Distributors has been successful in conducting advertising and merchandising to



Left are: Art Schilder, secretary-treasurer of Pacific Delta and Jack Logan, assistant secretary-treasurer. Schilder's principal concern is credit and finance, while Logan serves as a liaison between Pacific Delta headquarters and its members dealers. Logan keeps



the membership informed on new products and maintains personal communication in organization's dealer-relations program. At right is a section of the Pacific Delta office, with Bill Hulse, safety and insurance manager of PD, and members of the office staff.

promote the L.P. gas industry.

Decision-making on fuel contracts and on advertising programs is done by committees, working under the supervision of the board of directors and the executive committee. There is a Fuel Committee, whose present membership includes Jack Douglas, Douglas Gas Service, Woodland; Jerry Wheeler, Maco Gas Co., Lodi; Bill Moore, Placer Gas Service, Auburn; John Agbashian, Valley Butane Inc., Fresno; and Ralph Weaver, Weaver Gas Service, San Jose (all are California companies).

The Equipment and Products Development Committee consists of Ross May, Maco Gas Co.; Bob Blair, Blair's, Dinuba, Cal.; Bob Morter, Mor-Gas, Ventura, Cal.; and Jack Logan, the staffer.

Pacific Delta's services to members do not end with fuel and equipment purchasing and merchandising. There's also an insurance service, which gives the members the benefits of expert attention to their insurance needs. William Hulse is insurance manager for PD. He is neither agent nor broker, but is an expert who can give members help in their insurance buying. He also places business for members with brokers. In short, his job is to see that the members get the best coverage at the most favorable rates.

Insurance buying on favorable terms requires a full-scale safety

program. Hulse works with the dealers, conducting safety inspections on a continuous basis, giving safety training, and doing accident prevention engineering. He makes immediate and thorough investigations of all LPG accidents.

This sort of activity has helped to give the members a good accident frequency record, and hold their insurance rates in line.

As with other staffers, his work is supervised by a Safety and Insurance Committee, composed of Jim Fosmire, Modern Gas Service,

Chico; Bert Presley, Rotary Sierra Co., Sacramento; Jerry Wheeler; Maris Ward, Ward's Propane Service, Crescent City; and Hulse himself.

There are two other committees in the PD organization. The Executive Committee is headed by Al Anton, Anton's Propane Gas Service, Ukiah. Members include Charles Cavanaugh, Cavanaugh Brothers Inc., Tonopah, Nev.; John Agbashian, Jim Fosmire, Ross May, and Ralph Weaver.

The Credit Committee is made up



The wives of Pacific Delta Distributors also participate in membership meetings. It is the policy of the management to select meeting sites that are both convenient and attractive for after-meeting relaxation. When a Western Liquid Gas Association convention takes place, the group sets its meeting date to coincide with it.

Pacific Delta Distributors



Pacific Delta members are identified by their common trade mark, "Delta Gas," shown here on the sign displayed by the Placer Gas Co.'s Tahoe Valley branch. This firm serves the famous Lake Tahoe resort areas at the juncture of California and Nevada.

of Gussie Spears, Bakern Liquid Gas Co., Bakersfield; Jack Griggs, Jr., Jack Griggs Inc., Exeter; Bob Kennepohl, Lancaster Gas Co.; and Art Schilder. Schilder, an ex-automobile dealer with a legal background and a world of solid business experience, is secretary-treasurer.

The committee and staffers work under the over-all direction of the board of directors. Chairman of the board is Ed Throndsen, Empire Gas Service, Santa Rosa. President and manager—and the top spark plug in the organization—is Ralph Weaver, Weaver Gas Service, San Jose. John Agbashian, recently president of the Western Liquid Gas Association, is vice president. Schilder and Logan of the staff round out the panel of officers.

Other members of the board are Anton, Cavanaugh, Douglas, Fosmire, May, Gussie Spears, and Ward.

The board of directors is much more than a figurehead group. The board holds monthly meetings to make policy decisions. The Executive Committee also meets frequently to monitor operating procedures.

Membership meetings are held quarterly. These meetings feature a program made up of talks and demonstrations by some of the leading figures in the industry. Members also are given up-to-the-minute news on appliance develop-

ments and staff reports on other pertinent matters.

That, in brief, is the picture of Pacific Delta's functions as an organization. But as individuals, members cooperate in other ways, to their mutual advantage. Several years ago, for example, one of the members died. Other members formed a separate corporation to buy the deceased's firm and its branches. The heirs were given a generous payment for the holdings. The firm has already begun to expand further, and both the retail operation and the bulk trucking service have proved profitable.

Recently, the members started a

pipled gas service to serve the California and Nevada area at Lake Tahoe's south shore. The opportunity to share in the ownership for the time being has voluntarily been restricted to PD members and staff personnel.

The future is bright for the Pacific Delta group. More and more independent LPG dealers are showing interest in joining with their fellow dealers in order to compete effectively with the large firms that have branches in their areas.

Present indications are that there will be more and more purchases of LPG operations, too. The growth of PD membership has increased the amount of investment capital available to make these purchases.

And small wonder. The members have profited from their association with Pacific Delta. And in turn new properties they buy have a world of management vision and experience to guide them. Already they are showing a handsome return.

That's the story of Pacific Delta, an organization of far-sighted dealers who found a profitable way to work together without losing their identity. They have successfully—very successfully—shunned two popular formulas for growth, the merger and the formation of a tax-free cooperative. The cooperation they practice is done under the banner of taxpaying free enterprise. They've worked out a formula of their own, which could well find imitators in the industry in the years ahead. ■



The Al Tahoe branch of the South Tahoe Gas Co. is a new company recently purchased by several PDD members who formed a separate corporation. At present, ownership is restricted to members only.

- *What's happened since the pipeline came to Florida?*

In September 1959
as reported in a
BPN survey (right),
dealers were concerned
about the invasion,
but determined to
face up to it.
Now, a year later . . .

HOW DO FLORIDA DEALERS FEEL ABOUT THE NATURAL GAS INVASION?

96 per cent of the answering dealers believed they would lose a portion of their gross profit. All but two spotted out their estimated loss in percentages, ranging from 3 to 50 per cent. The average expected loss was 17 per cent. More than half estimated the number of customers they would lose activities ranged in to 500 customers but averaging 225.

50 per cent placed the blame for their expected losses on the collapse of major
into their territory. On the other hand, 11 per cent believed their loss
could come because natural gas would enable their local ability to lower
its rates from those for manufactured gas.

There was only one positive reply; the others having failed to answer the question. Specific answers could be lumped into four categories: importation (23 per cent), generic and off-invoice sales efforts (23 per cent), educate the public on generic use (16 per cent) and

For most of them, this merely amounts to increased effort in their current territories. Only 42 per cent will have to extend reaches and not one will have to make big leaps of innovation.

46 per cent were willing to estimate how soon they would recover their losses. EV estimates ranged from "immediately" to four years, but the average was 18½ months. However, 50 per cent believed natural gas companies would be in continuing operation.

50 per cent expected to eventually benefit from natural gas. The public will become more open-minded, 58 per cent said. Another 25 per cent felt it was too soon to tell but most were optimistic. So far, only two dealers had been able to cooperate with gas utilities in air-conditioning efforts.

DEALER COMMENTS

On the effects of natural gas

"I think the best way to become more open-minded: With good service that's fair price, you can take your business from there. It is one of the ways we will know an offshore company's earned your acknowledgment and respect—openness, which we hope to achieve."

On cooperation with the utilities:

"The LEP's *Arbeitskreis* in our area are very interested in having student jobs. First, the money spent for promotion and is of great benefit to us. Second, we are competitive with—and in some cases better than—actual jobs. Third, the

"The clothing will cooperate fully in supplying merchandising."

On what they'll do about it:

On pricing

the appliance market will be much better—and that's for us."

"I just want to see to stick together and work one for all and all for one."

the fact, by providing information on income, I can offset any revenue in net profit by increased expenses (due to those who will change their trade). If not, I will take a net loss at the end of my operation and try to attract a profitable customer.

They're prospering side by side with natural gas

WILLIAM T. HARPER • Eastern Editor

A BPN Exclusive

FIFTEEN MONTHS AGO the sovereign state of Florida was invaded. The enemy swept in from the west, raced its forces across the northern panhandle and then ground its way down south through the heart of the state. The invader was the Houston Texas Gas & Oil Corp. and its natural gas pipeline. Dire things were predicted for the defenders, among whom were included the independent liquefied petroleum gas dealers. Some so-called prophets saw them being ground under by the natural gas "Wehrmacht." Others figured these dealers would fold up their tents to

slip away in the darkness.

Instead, they have taken the best the enemy had to offer, and have come back stronger than ever. The L.P. gas dealers of Florida are winning their battle for survival!

That is the impression of the "Fighting in Florida" gained by reading the results of the latest informal survey conducted by BUTANE-PROPANE News. BPN's staff made contact with 20 cities where the fighting has been the toughest, cities in which more than 90 LPG dealers were involved. The reports showed that not one of those dealers had raised the white flag of surrender to natural gas, and they don't intend to.

The reports were truly encourag-

ing. They came in from cities as far west in the Panhandle as Milton (50 miles from Mobile, Ala.) and as far south as Fort Myers on the Gulf Coast and to the Miami area on the Atlantic Coast.

The only reply that was anywhere near pessimistic came from a dealer in Fort Pierce—which does not yet have natural gas—and he felt that the entry of natural gas “will probably hurt.”

Other dealers replied that the entry of natural gas will help them as the people in their areas become "gas conscious." Some were philosophical, such as the dealer in Perry who rationalized about his losses, "at least we won't have to purchase new tanks for new custo-

Natural gas in Florida

mers." (He'll just use the ones he gets back from lost customers.) Some dealers were practical. Speaking of the new competition, a Marianna LPG dealer said, "Natural gas will help our business because it will be compared with our service which we feel is superior . . ." Still another felt that the invasion would "have no effect."

The situation today, in brief

- By promising more than they can deliver (ratewise), the pipeliners have alienated a lot of customers and potential customers.
- In certain localities, LPG for domestic uses is actually selling for less than natural gas.
- Only one dealer who reported has cut rates to compete. Others are depending upon "superior service" to hold the line against natural gas.
- Losses of customers have ranged from three per cent to 20 per cent. Half the dealers expect to recoup their losses soon.
- Dealer-utility relations are good in some areas, poor in others. ("The utility is showing no regard for delinquent accounts." "Pipeline good for our business.")

Perhaps the most realistic account came from R. C. Woodward of Western Natural Gas in Jacksonville. Having lived with the invaders from the very beginning, Woodward said that "the loss was not as great as anticipated and (we) expect to build back to where we were within 18 months."

To be sure, some of the dealers did lose accounts after natural gas came into their territory. Eight out of ten of those dealers answering said the utility had taken some of their customers. The figures ranged from a high of 20 per cent of their total down to only three per cent. And some expect to lose even more of their present accounts during the next couple of years. But at least half

of these dealers expect to offset these losses. How? Well, some are turning to new loads such as carburetion. Yet, the majority of them feel that they can find new (or regain old) domestic customers to fill the gaps.

At first, the latter thought above might sound like wishful thinking on the part of the dealer. However, the LPG business was, in many cases, given an unsuspected and completely unplanned boost by the Houston Corp. When the invader first came into some of its new territories, it promised both lower rates and better service. But the customers soon found out that whereas they had been promised everything would be apple pie, all they got was the crust.

Sure, lower rates than LPG could offer were promised for natural gas users before it came into the state. Then, in less than a year, some customers found they were paying higher rates. A good example of this was what happened in the Miami area. This time, we are not quoting from an LPG dealer—who just might be a little bit prejudiced. The following is from a story that appeared in the Dec. 6, 1959 issue of the *Miami Herald*. The headline over this story reads, "Cheaper Gas Isn't Natural." It tells of the rate structure for the City Gas Co.'s LPG.

"Their new rate structure is actually lower, in some instances, than the rates for supposedly low-cost natural gas."

In order to explain this, the story continues:

"The Houston Corp.'s Miami distribution system is old and expensive to maintain. Houston bought it reluctantly from the Florida Power & Light Co. for a reported \$3.5 million. "Now that it's stuck with the system, the Houston Corp. is trying to make it operate profitably, and that means high rates."

The American Gas Association, in one of its recent "Executive Summaries," said:

"Since the Houston Corp.'s pipelines represent the newest major facility in the country with high-cost mileage and average high-cost gas, the economic advantages of change-over from manufactured gas or L.P. gas to

natural gas have not been as clear cut as in some other parts of the country."

However, not only the customers in Florida, but apparently a good part of the natural gas industry has been taken back by the Houston Corp.'s actions. A source within the AGA itself told BUTANE-PROPANE NEWS:

"The price of natural gas coming in (to Florida) is by no means putting the L.P. gassers out of business. Quite the contrary, as a matter of fact. (Houston's) promises have not been kept. They promised a $\frac{1}{3}$ rate drop in some cases. Instead, the minimum rates

Depend upon domestic business

• BPN's second survey of the Florida situation was sent to key dealers in 35 cities. A total of 50 per cent of those dealers responded with information on what has happened in 60 per cent of those cities. The communities were divided almost equally between those that did already have natural gas and those that did not.

Of those dealers answering the survey, 92 per cent depended primarily on domestic business.

Dealers responding in those communities that do not yet have natural gas reported in 82 per cent of the cases that they did not expect it "soon." On the average, they did expect it in about three years. The invasion was expected before the end of next year by 18 per cent.

New customers were picked up by 86 per cent of the dealers answering and over 70 per cent of the new customers were the same kind (domestic) that the respondents had just lost to natural gas.

have been raised two, three and even four times until now they're greater than ever."

Continuing, he said that there has been "bad public relations on Houston's part with its method of new rate filings. There have been pages and pages of bad publicity on the front pages of the newspapers in Florida over the past few months. This is giving the

entire gas utility industry a black eye."

It is apparent that potential customers are beginning to hesitate before committing themselves or their communities to natural gas. St. Augustine, located 40 miles down the Atlantic Coast from natural-served Jacksonville, does not yet have it. "The people in this section are beginning to learn that the low cost at first (of natural gas) is just a phony," according to a local LPG dealer. "The people here are very suspicious because of the experiences in Jacksonville and South Georgia, as well as in Miami, where natural gas has raised rates after installation."

Carl K. Greene, owner of the Greene Gas & Appliance Co., in Vero Beach, cites the same examples.

Factors other than increases in natural gas rates have disillusioned customers in Florida. Look at the situation as reported in Leesburg, a town of 7400 people located about 50 miles WNW of Orlando. There, according to Don Riddle, manager of the Mid-Florida Gas Co., the natural gas company's conversion crews reportedly "used the wrong tables for conversion at first and many of the appliances are about 10 per cent over-fired. This, we feel, may be one of the reasons some of our former customers are complaining of higher gas bills on natural even though their rate is lower."

Houston Corp. itself, or the newness of natural gas in Florida, are not the only reasons why customers have become disenchanted. Take the case of Milton, Fla., which has had natural gas since 1947. This community of 2000 is served by the United Gas Pipe Line Co. LPG dealer A. W. Lindsey of Lindsey Gas & Appliance Service in that area told BUTANE-PROPANE News, "Many customers aren't interested in natural because the pressure isn't too good in winter . . . There is somewhat of an engineering problem here due to (the fact that) natural gas lines aren't sized right. And there has also been trouble with an underwater pipe line (nearby). Natural gas customers have been without gas when the line was out—which helps us."

On the other side of the ledger, there were reports in the survey

that showed that some utilities were cooperating with the LPG dealers. C. J. Fowler of Hydro-Gas Co. in Quincy stated that his company "sold about half the appliances that went on natural gas." D. J. Fussell of Pierson Gas Service Inc., in Fort Myers said the utility had cooperated with his company when it came to change-over and delinquent accounts. On the other hand, a dealer in Lake City charged that his city is piping houses and making conversions on a no-charge basis, with no regard to delinquent accounts.

It would seem that, left to its

Favor municipal utilities

• *One of the most disturbing points uncovered in the BPN survey of the Florida situation was the obvious support by the people in that state for municipally-owned-and-operated gas utilities. LPG dealers who answered the survey from communities as yet without a gas utility reported that in cases where the arrival of natural gas was expected, 85 per cent of those utilities would be municipally-operated. Of those communities that already have natural, 80 per cent have municipally-owned utilities.*

According to an AGA report at mid-year, the number of municipal gas utilities under construction or in operation had increased by 100 per cent (from 12 to 24) during the past year. Thirteen more are expected in 1961. Presently there are only five states in the entire country that have more than 35 municipally-owned utilities.

The significance of this is that, in this case, L.P. gas dealers in Florida are paying taxes to try and help the gas utilities put them out of business. Above all, these dealers should do their best to halt this trend. It can at least be delayed as it was in Fort Pierce. There the city commission passed a motion to set up a municipal gas utility. Among others, the LPG dealers in that town fought the action all the way to the State Supreme Court and any further steps have been put off for from two to four years.

own devices, the natural gas industry would by itself almost do enough to insure the continued success of the Florida L.P. gas dealers. That is not enough for some of them though. Service is the key for Emmitt Parish, manager of Suburban Gas Co. in Graceville. He says, "We think that by aggressive sales and better than average service, we will not be hurt much. In the long run, we feel that our position will be better."

There were other dealers who felt that the small size of the communities they served would keep natural—like the proverbial river—away from their door. F. M. Lincoln of Williston Gas Co. in Williston said, "I don't think that natural gas will be profitable in a city of this size, population around 2200." Dealers in Melbourne (pop. 7000) said "natural gas is not feasible in Melbourne." Dealers in Dade City (pop. 3800) reported, "small community population—too low for natural gas."

Another advantage found by one LPG dealer was in community relations. Checking in from Marianna, he said that his company's efforts help the entire community whereas the work of the natural gasers is only a small portion civic-wise.

It would seem then that the fears of the LPG dealers harbored prior to the coming of natural gas to Florida were exaggerated. The survey has shown that they can live with the new competition and profit just as they did with the old. The methods of doing this are varied and, happily, they do not include price cutting. Only one instance of price cutting was revealed in the survey. Otherwise, competition was met by capitalizing on the mistakes of the invader; by finding new markets such as carburetion and farm loads; by finding new customers who had suddenly become gas-conscious; by cooperating with the utilities to increase appliance sales and thereby recoup lost gas sales revenues. There is a lesson to be learned here by LPG dealers throughout the country. Florida has proven itself an example of the fact that the coming of natural gas does not necessarily mean the going of L.P. gas! ■



PLANNING Careful planning came first. Here Fred Lundin, (top, center) vice president of sales for the Mazenko supplier, Dri-Gas Co., Hinsdale, and Leonard Mazenko review contest rules and outline the program in a briefing session for employees. These are the key contact people on whose active support so much depended. From the left are: Cliff Wirt, Ross Meohle, Mrs. Sue Mazenko (Mazenko's mother), and Jerry Fite.

Mazenko shows how to cash in on the Sweepstakes

ADVERTISING On June 28, the day following the front-page story, Mazenko (shown with the newspaper's advertising manager, Dave Jackson) broke the first Council ad. Others followed on July 5 and July 12. He got radio time for the campaign in this interview (right)



PREPARATION In readiness for the opening of the campaign, the service trucks and bobtails were

A BPN Exclusive

IF YOU'RE GOING TO LAUNCH A PROMOTION, the way to do it is to go all out, in the opinion of Litchfield (Ill.) dealer Leonard Mazenko.

Mazenko signed up for this year's National LP-Gas Council's \$200,000 Sweepstakes sales building promotion. One week after receiving his kit of advertising and promotional aids, he was on his way with a front-page story in the Litchfield "News-Herald."

From that day (June 27) on, the tempo of the campaign was maintained through the wide variety of promotional ideas shown on these pages.

Sweepstakes dealers will wind up the big promotion on Sept. 30. Even if none of his customers wins the \$25,000 all-LPG home, the \$3000 LPG-fueled farm tractor, or any of the 150 home appliances being offered as national prizes, one is sure to win the local prize—a deluxe water heater. ■

with Don Yaeger, the station's program director. The station also broadcasts Council commercials. Mazenko plans to wind up the campaign with radio interviews of customers as they come in to enter the Sweepstakes. The contest closes the end of this month.





rigged out with Sweepstakes banners and posters. The display window was dolled up (note the local prize, a



water heater in the center of the display), and the campaign theme was carried right onto the display floor.

GETTING THE WORD AROUND

Word-of-mouth advertising has played a big part in Mazenko's Sweepstakes success story. Special targets were people who "get around" themselves—such as newsboys, the

policemen on the beat, customers who dropped in the store (bottom left, Harry Sievers signs up), and customers who at their homes or places of business (bottom right, Mr. and Mrs. N. D. Grote learn all about it.)





J. ARTHUR THOMPSON

At Stahmann Farms in Las Cruces, N. M., LPG is used in harvesting nuts, cultivating cotton, brooding geese; in hauling crops to processing plants, in building facilities, and in heating employees' homes. That's why Stahmann may truly be called . . .

The complete L.P. gas farm

ONE OF THE MOST IMPRESSIVE agricultural operations in the Southwest is Stahmann Farms Inc., located a few miles from Las Cruces, N. M. It has 3700 acres of pecans—about 80,000 trees—said to comprise the largest grove of cultivated pecan trees in the world.

It also has 45,000 laying hens and 1000 acres planted to cotton, and every year it raises 200,000 geese.

(And it sells goose feathers by the carload!)

The combining of nuts, cotton, and poultry is not without purpose. Pecan trees shouldn't grow too close together. Rather than waste all the land between the trees, Stahmann plants it to cotton. And to keep the weeds that grow in the cotton under control, Stahmann raises geese.

An operation of the size and diversity of the Stahmann Farms opens up tremendous load possibilities for fuels. For example, there is a brooding flock of 10,000 White Chinese geese, maintained for the production of eggs. The incubators have the capacity to handle 100,000 eggs at a time, and young goslings come off this production line at a rate that sometimes reaches 3600 per day over a four-month peak period.

When they come out of the incubators, they go to brooder houses, where a lot of fuel is needed to keep them warm, contented, and happily gabbling. Ultimately, of course, they must be transported to market or to a processing plant. Some, at the age of six weeks, are sold to other cotton farmers who use them to control the weeds. The rest of the birds are raised,



NUTS AND COTTON. LPG-powered tractors harvest the pecans from the 3700 acres of pecan trees, and prepare the soil for planting. They do the planting and the cultivating of the cotton which is planted between the rows of trees.



GOSLINGS. LPG has the job of "mothering" more than 200,000 of these little fellows every year. Before these youngsters are ready for market, they will have already helped pay their way by keeping down unwanted vegetation in the cotton crops.

then killed, plucked, processed, packaged, and frozen in the big goose packing plant on the farm. They average around seven lb, dressed weight, and are marketed by Armour & Co. under the Junior Young Goose label.

There is also cotton to plant, cultivate, pick, and gin in the farm's own plant. These operations require a number of tractors with special attachments.

Tractors are important in harvesting nuts, too. Another sort of special attachment, designed and built by the Stahmanns, shakes the nuts from the trees. A machine comes along and picks them up off the ground. From this point, they are hauled to one of two big pecan processing plants on the farm where they are shelled, processed, and packaged for marketing under the Del Cerro label.

Tractors to do these and other jobs on the farm total approximately 127. Pickups to do the day-to-day hauling total 52. There are also 37 other trucks in the 1½- to 3-ton capacity range, two service trucks, two buses, and a few pieces of other mobile equipment.

There are irrigation pumps to be run. There is a continuing program of construction, maintenance, and repair to keep going, and this requires welders, cranes, and similar equipment. Ditchers and draglines are needed for the many excavation jobs that have to be done at frequent intervals.

All this requires people, and lots of them. Stahmann employs 475 on a full-time basis. During harvesting, their number swells to 700 or more. They must be transported from place to place. And they

must be housed, and their houses must be supplied with fuel.

Now there is some natural gas on the farm. But in many cases it is cheaper and more convenient to use LPG than to pipe natural gas to the spot. So for many years, Ikard & Newsom, Las Cruces dealers, have supplied LPG for certain uses. Many employee homes use it. The brooders use it, too.

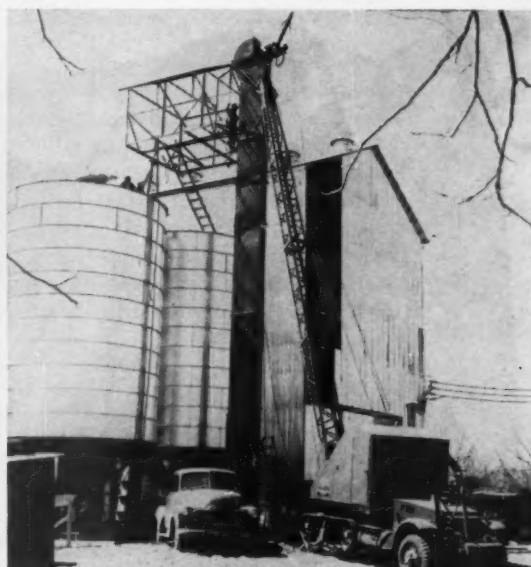
But the biggest potential load was in carburetion. Some time ago, Jim Ikard persuaded the Stahmanns (Deane F. Stahmann, the father, and his sons Deane, Jr. and W. J.) to give it a try. For nearly a year, the possibilities were studied and trials were made. Ikard assisted in the first carburetor installations, later worked with Homer Miller, the maintenance foreman, in working out the inevitable problems. Ultimately, management was completely convinced, and more than 200 pieces of powered equipment were converted.

At this writing, it is still too early to obtain precise comparisons of costs of propane vs other fuels. However, the Stahmanns are convinced that they are saving substantial sums in lower fuel costs, longer equipment life, reduced maintenance, and less down time.

For Ikard & Newsom, the farm is a great customer. Sometimes their transports deliver a full load a week to the 12,000-gal. storage facilities on the farm property. Sometimes, when activities are humming at their peak, they deliver four or more. Stahmann Farms are impressive in many ways, and not the least of these is their tremendous capacity to use fuel. ■



MAINTENANCE RIG. Propane powers the engine which runs this 300-amp Hobart welder, used in the extensive construction and maintenance work required to keep the 3700 acre farm in operation. Twenty-four people are employed full time in mechanical equipment repair alone.



CONSTRUCTION VEHICLE. When a new feed mill was needed, this Schield Bantam hoist mounted on a remodeled Army half-track helped with the high work. Both the motor and the hoist are powered by LPG—as are more than 200 other pieces of mobile equipment.

NOW!
another performance "first"
for

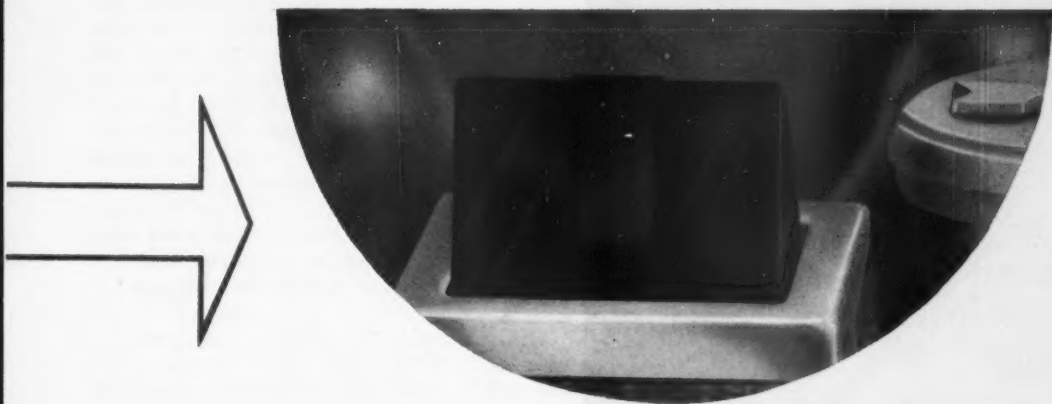
CertiMatic[®]

automatic throwover
regulators...by

REGO



*Complete outfits with pigtails,
mounting bracket, and direct or
remote indicator available.*



NEW upright indicator tells the world!

✓ YOUR DRIVERS CAN SEE IT
from 30 feet away

Not just a vertical red signal, but brilliant, reflective *Scotchlite* in a non-breakable, molded plastic prism shouts its warning to your drivers and customers whenever cylinder replacement is needed. This new eye-catching, vertical signal now is standard on all RegO CertiMatic Regulator Outfits. Drivers can see it without dismounting from truck, a "plus" that saves you money.

performance at its best

CertiMatic outfits combine two-stage regulation and automatic throwover from service to reserve cylinder with uniform delivery pressure on loads from pilot light to 225 cfh (568,000 btu/hr). Body and bonnets are die-cast aluminum—tough, rugged, corrosion-proof. Nylon handle in brass liner resists impact, won't break in freezing weather. Entire unit is RegO quality-built for long-lasting durability, and effectively

✓ YOUR CUSTOMERS CAN SEE IT

sealed to prevent leakage, and entry of water.

convenience for customers.. profits for you

With RegO CertiMatic Regulator Outfits, your cylinder-gas customers enjoy the maximum benefits of LP-Gas dependability. This encourages more uses, results in greater loads. Added sales volume — per stop — means more profits for you.

Once you've installed these low-cost automatic regulators, you can start adding fully automatic gas appliances almost without limit, for each will handle all 7 major gas appliances combined. Uninterrupted service and maintained uniform pressure—the two "musts" if you're looking for profits—now can be yours as never before with new Prism-Signal CertiMatic Regulators made only by RegO.



DO YOU KNOW
it will pay you
dividends to join!

The **BASTIAN-BLESSING** Company

4201 West Peterson Avenue, Chicago 46, Illinois

WORLD'S LEADING MAKER OF VALVES, MANIFOLDS,
REGULATORS, AND CYLINDER OUTFITS FOR LP-GAS CONTROL

The great meter mystery

or, what happened to \$1020?

A BPN Exclusive

are correlated and an adjustment made in the prover reading to correct for the temperature differences between the liquid in the prover tank and the liquid going through the meter. For temperature compensating models, it is assumed that the meter temperature is 60 deg., and a prover correction is made between the actual correction of the temperature in the prover and the assumed 60-deg. temperature in the meter.

Provers are available in either stationary, truck-mounted, or trailer-mounted models. The stationary type is mounted on a steel base for use as a permanent installation. The two-wheel trailer unit is equipped with a hitch jack and two rear jacks for accurate leveling before a meter is tested.

Before delivery, each unit is shipped to the National Bureau of Standards for calibration. This is done with water, in accordance with instructions contained in a special supplement, issued in June, 1958, to the NBS Handbook 45, "Testing of Measuring Equipment." Complete proving procedures are also set forth in that publication.

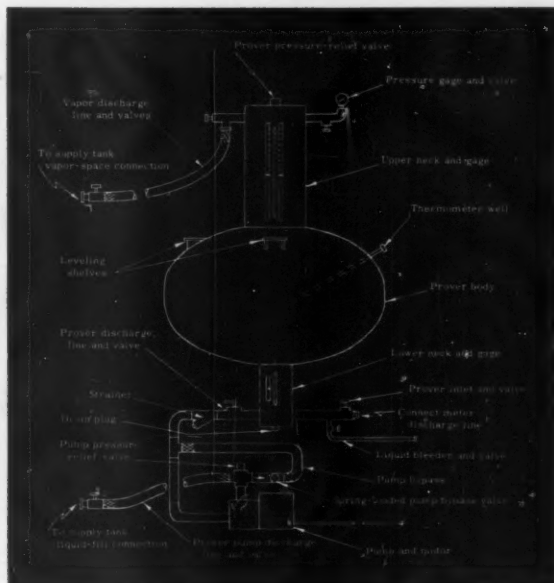
In the months and years that have followed the introduction of the provers, hundreds of meters have undergone field tests with this type of equipment. Many have been found inaccurate, and have been adjusted, with the result that potential sources of profit leaks have been securely dammed up.

Actual experiences have shown how serious these losses due to innocent meter delinquency can be. A report from the Economic Practices Division of the Wisconsin Department of Agriculture showed that two out of every three meters tested were registering in favor of the dealers' customers. That meant that 66⅔ per cent of the customers were getting gas they hadn't paid for.

Another report, from an independent LPG dealer in the Midwest, gave the results of tests on meters on 40 trucks and in 26 bulk plants. To his surprise, he learned that he had been losing from one to two per cent of the total potential revenue every year.

In Illinois, one dealer revealed that, upon testing, his older meters were found to be delivering four

The volumetric L. P. gas meter prover is specially designed and constructed for high internal pressures (250 psig). The body is spheroidal with top and bottom glass necks. The prover must have a capacity of at least 50 gal.



per cent more gas to his customers than was paid for.

The provers were intended primarily for distribution to state weights and measure bodies. The first state to put one into operation was Wisconsin, which began in July 1958, a program of checking the accuracy of meters mounted on delivery trucks, used to dispense and measure LPG to customers.

The Wisconsin move was brought about by the action of the dealers themselves. Reports N. E. Kirschbaum, supervisor of the Weights and Measures section, "Several dealers were extremely interested in the accuracy of the meters and through their efforts, the legislature provided us with the funds necessary to purchase the prover."

The state made its first round of tests in 1958, inspecting every available liquid meter. In all, 288 meters belonging to 208 dealers were checked. Of these, 204 were sealed, 89 adjusted, and 148 condemned for repairs.

A second round of testing was completed late last year. At the end of that round, a cumulative total of 699 meter tests had been made; 477 had been sealed, 310 adjusted, and 222 condemned for repairs.

Testing was scheduled to be carried on once each year, in compliance with state statutes.

Hickgas Supply Corp., Roberts, Ill., purchased a prover in January 1959. According to Marvin Fritch-

ley, who was placed in charge of the proving program, most Hickgas operations were buying more propane than they were selling and the meters would not check out with the truck percentage gauges.

Previously, the meters had been checked by weight—"Not a very accurate method," says Fritchley, "because of the rapid change in weight of the propane with changes in temperature."

On the first round of tests with Hickgas' 38 bulk trucks, four meters were on the mark, one tested out at one per cent fast, and the other 33 averaged right at two per cent slow.

Hickgas also checks meters for other dealers. "The service is available to all dealers in Illinois and Indiana," says Fritchley. "A charge of \$30 is made for the first meter and \$25 for each additional meter."

Testing and correction takes about one hour per meter. Hickgas intends to make a check of its own equipment every 350,000 gal. pumped, or at any time a meter shows it is not checking out with the truck's percentage gauge.

What's it worth to check a meter? Fritchley figures it this way:

"A bulk truck hauling 600,000 gal. per year with a meter registering two per cent slow would cost a dealer 12,000 gal. annually. At an average of 8.5 cents per gal., that comes out to \$1020."

We use our degree day system to get new customers!



Says T. C. JOHNSON • Protane Corporation, Grove City, Ohio

A BPN Exclusive

WE KNOW THAT THE OBJECT of a degree day system is to increase the gallons delivered per truck mile traveled and, in general, to reduce trucking costs and bookkeeping expenses. (Many operators, including ourselves, can point to the fact that gallons delivered per mile of truck travel have jumped from 30 gal. to 45 or 50 gal., and that often we'll deliver as much as 80 gal. extra per stop.)

But we are enjoying additional advantages, too. One of the big bonus benefits has been the improvement in customer relations.

Our degree day recorder is on the wall in our showroom. You can hardly miss it as you come through the door; frankly we make it a point to see that you don't! Anyone who is a prospective heating customer is shown the recorder and given a little talk about the degree day system. While they won't all fully understand the system, they will be convinced that we know what we are doing and will serve them well.

This is one way of selling the customer. Another is to promote the use of the recorder in our advertising.* We feel this sort of thing gives us a distinct advantage over competitors (see illustration).

* Hidy-Brown, the manufacturer, supplies the mats.

Ever had a customer come in and say, "I couldn't have used all that gas last month!"? Well, it's not hard to convince him that he did if you have a degree day system. You can show him that his burning rate remained the same as before and that only additional degree days accumulated on the recorder this month were responsible for the larger bill. (The recorder doesn't lie!)

Did you ever think of establishing a burning rate based on degree days for the over-all operation? You can, if you take the total gallons delivered in a heating season and divide that figure

by the total degree days for that period. This will give you a yardstick against which you can measure performance.

For example, suppose you come up with a figure of 300 gal.-per-degree-day. If you continue to deliver gas at that rate, you are holding your own. Any increase in total deliveries will be reflected in your gal.-per-degree-day figure when it is brought up to date.

Our degree day recorder is also a big help in ordering gas for our plant. It shows us when the cold weather is getting ahead of schedule and helps anticipate our needs. When the heating season is about over, we can decide whether we want to keep our storage low so we can take advantage of any price break in gas.

Some people question the need for the recorder, wondering if they can't do all right with weather bureau figures. Our answer to this is definitely **no**. Officially, to find the number of degree days that have elapsed within a 24-hr period, the weather bureau must take the high and low temperatures from one midnight to the next, average it, and subtract it from 65 deg. Brief periods of hot or cold weather don't show up in this average. Two or three hrs at 80 deg. would cancel out 20 or 22 hrs at 50 deg. (Eighty deg. is 15 deg. above 65 deg.; and 50 deg. is 15 deg. below



Here, T. C. Johnson takes a reading from the Hidy-Brown degree day recorder. By using this method of measuring, Protane has reduced its trucking costs, the bookkeeping load and established good will with its customers.

In celebration of our 60th year of world-wide progress . . .

A Genuine Coleman gas-lite

Yours to give now as a
"buyer's bonus" when
you install



America's Only Bonded Line Heating and Air Conditioning

This new Coleman Gas-Lite is the key to the most complete and most exciting business-building program ever offered through heating and air conditioning dealers. Most complete because it includes every imaginable aid to selling. Most exciting because it gets an enthusiastic response from everyone in the market for heating or air conditioning.

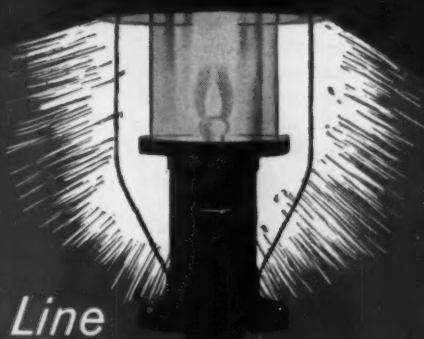
Here's the plan. As an anniversary salute, we're making it possible for you to offer a genuine Coleman Gas-Lite to your customer with the installation of any Coleman central furnace, wall heater, floor furnace or air conditioner. It's an offer your prospects will go for when you give them the lamp as a bonus for buying now! For more information, use the coupon below or call your Coleman distributor for your complete program kit containing full details—right away!



Coleman's Gas-Lite promotion will be announced to home owners in the March 26 Saturday Evening Post

Best selling tool of all—you offer this exclusive \$500 bond with every unit you sell

Also makers of famous Vit-Rock water heaters, Decorama space heaters, Coleman lanterns, camp stoves, jugs and coolers—mobile home heating and air conditioning



Works on any gas—install 4 ways
Can be mounted on post (as at left)



Can be mounted on wall with decorative bracket

• The Coleman Company, Inc., Wichita 1, Kansas

Quickly send more information on your Gas-Lite promotion.

• Name _____ Title _____
• Firm Name _____
• Address _____
• City _____ Zone _____ State _____

Degree day system

65. They cancel each other out.)

Another good reason for having a recorder is that the degree day count you use for the system must be accurate for your own locality, and it must be accurate at the time you read it. There is no chance for human error with our degree day recorder. And, don't forget that telephone calls to the weather bureau cost money, especially if you take into account the time spent each day by the caller.

Here is how the degree day system works:

A "K factor," or burning rate, is established for each customer who is heating his home with gas. This K factor can be established two ways. The first way is to take the gallons used in the heating season last year and divide that figure into total degree days for the year. Example: If 2000 gal. of gas were used by John Jones last year and 6000 degree days had occurred last year, the 2000 gal. would be divided into the 6000 degree days and the result would be a K factor of 3.0. This means that every time three degree days come up on the recorder, John Jones will use one gal. of gas.

The other way in which a customer's K factor can be figured is to fill him up in the Fall, being sure to record on his card the degree day count on your recorder when you fill him up. Let him burn some gas, then go out and fill him up again, remembering

to record the degree day count at this time on his card. Then you will know two things: how many degree days occurred between the two fillings, and how many gallons of gas he took. For example: If he took 150 gal. of gas when you filled him up the second time and 450 degree days had gone by, the 150 gal. divided into the 450 degree days gives a burning rate or K factor of 3.0. This, as we said before, means that every three degree days that click on the recorder, this customer will burn one gal. of gas.

Now, the important thing is not how many degree days it takes a customer to burn one gal. of gas, but how many degree days it takes for him to burn whatever amount of gallons it is most economical for you to deliver to him. After all, the whole point of the degree day system is to be able to deliver a maximum fill at every stop.

This is where the money-saving comes in. We determine what amount of gas is most profitable to deliver to each customer. For instance, if John Jones (whose K factor we have already established as 3.0) has a 500-gal. tank and every time we go to him we want to deliver 300 gal., we simply multiply 300 by 3 and get 900. So, every 900 degree days John Jones' tank will take 300 gal.

The cards for running the degree day system are relatively simple. For each customer, we have an alphabetical card on which we have his name, address, the size of his tank, and his K

factor. After each delivery we put down the date, gallons delivered, whether his tank was full, or the percentage of gas in it, the degree day count on this day (read directly from the recorder), and the degree day count of the next delivery. In the case of our friend John Jones, we get this by adding 900 to what the degree day recorder reads.

Now is the time to get out the DEGREE DAY cards. We use one of these for every 100 degree days that occur in our area. After the alphabetical card has been completed, but before we file it, we post the customer's name on the degree day card which is appropriate for his next delivery. For example, if John Jones' next delivery is due at 1256 degree days, his name is posted on the 1200-degree-day-card along with every other customer whose deliveries are scheduled between 1200 and 1299. This card stays in the degree day file until 1200 comes up on our recorder. Then it is pulled and all deliveries are before us.

We should explain that each customer is given a geographical symbol which immediately tells us where in our territory the customer is located. This symbol is in front of the customer's name so we can group customers together in a given location. Also on this card are the gallons we want to deliver to each customer so we can be guided as to how many stops the truck can make. There is no law against peeking a couple of cards ahead of where we are working; in this way, we can catch stragglers in outlying locations to avoid special trips.

We are happy with our operation because we have much better control of our accounts. We know what is in a customer's tank at all times; we can keep a tank as nearly empty as we wish for summer fills; we can, if we have to, allocate gas to customers who need it most in times of shortages. We have completely eliminated run-outs and overtime trips, we have cut our trucking costs 25 per cent and because fewer delivery tickets are handled we have reduced our bookkeeping load. And, most important, we have built confidence in our customers' minds. ■

**WE'VE ADDED A
NEW SERVICE
YOU CAN USE**



Now, with our new Hidy Degree-Day Recorder, we can guarantee to keep you from running out of fuel. It's completely automatic, and you're free from all worry. This scientific instrument provides an accurate method of checking your fuel consumption right here in our office. We schedule your delivery so your tank is always at a safe level.

(Local dealer's name here.)

**EVER HAD TO SHIVER
BECAUSE YOUR FUEL SUPPLY RAN OUT?**

NEVER AGAIN!
WHEN YOU BUY
FUEL FROM



(Local dealer's name here.)

We guarantee to keep your tank well stocked and you'll never even have to call us, regardless of the weather. We've just installed the Hidy Degree-Day Recorder. It's the most accurate, up-to-the-minute method of measuring automatically your fuel consumption. Our Hidy keeps us posted on just how much fuel you use and tells us when you need a delivery. Call today for all the details on our GUARANTEED automatic re-fueling.

Here are examples of how Protane "sells" its degree day system to customers. Ads such as these impress upon readers the businesslike way in which their deliveries are

scheduled, give reassurance that they will have the gas when they need it and that they actually use the amount of gas they are billed for.



A new product's long, long trip to market

In today's highly developed economy, industry has come to take the introduction of new products for granted. Every month a new flood of devices is loosed upon the market. Sometimes, the very volume of these products must seem to indicate that every time a design engineer has a flash of inspiration, presto! a new product is born.



Not so. It's not the whim, or even the best-conceived idea, of the man at the drawing board that accounts for the introduction of a product. It's you, the user, who are the judge and jury. It's your demands that the manufacturer must satisfy.

But how does he know what you need and want? It may take years of research and thousands of dollars to find out, and to translate those needs into a product.

Walter Bond, sales manager for Selwyn Pacific Co., Los Angeles, tells a typical story of the tortuous path an idea travels from drawing board to market. It's not a unique story, says Bond, but one that is being constantly repeated by LPG equipment suppliers everywhere.

A BPN Exclusive

IT ALL BEGAN on a Wednesday afternoon in November of 1956 when a management team meeting was called in Los Angeles. Its purpose: to begin an investigation into the automatic regulator market. On

that day, a committee was formed, charged with the responsibility of answering three basic questions:

1) What is the outlook for the automatic regulator market five years from now?

2) Are there any basic or universal problems encountered in the field use of the automatic regulator?

3) Should the company attempt to launch a new regulator in the light of the answers to questions 1 and 2?

These simple questions touched off a systematic market and product analysis that was to last until September of the following year.

In April of 1957, the team presented its answer to the first question. It had found that, despite the trend toward bulk systems, there would continue to be a large-volume market for automatic regulators.

The team decided to continue the study. Armed with portable tape recorders, members went out into the field to find out first hand what LPG dealers wanted most in automatic regulators.

Two months later, enough data had been collected to give us a picture of the kind of regulator dealers wanted. From these data, correlated with past company records, a new product idea was born.

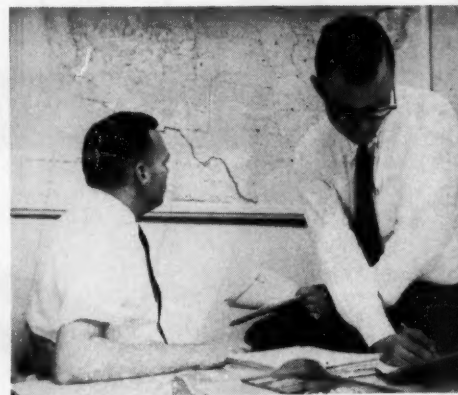
Early in August, members of the design-engineering department were brought in. After a briefing, they were given the assignment to develop a prototype of a new regulator, and funds were allocated for the project.

During the month, weekly meetings were held. As September approached, the design requirements were becoming increasingly clear. Out of the jigsaw pieces of field data, 21 basic wants of dealers emerged. These were consolidated into six broad areas of improve-



Tape recordings made in field tests brought back ideas on what L.P. gas dealers wanted in automatic regulators. Here, Jack Crawford, Sel-Pac district manager interviews Bob Frazer, Mutual Liquid Gas & Equipment Co. Inc. (l.).

JUNE 1957



Field information was evaluated and the engineering team went to work in 21 areas of improved design.

AUGUST 1957



Decision-making team headed by Arthur Bond Jr., general manager (l.) and Ed Lotz, chief engineer (r.) coordinated to set production target date.

That First Look Starts The Sale On Its Way! *That first look your customer gives a beautifully designed WARM MORNING Gas Heater puts her (or him) in a buying mood. When you explain and show the exceptional WARM MORNING comfort and convenience features and quote the bargain-low prices, chances are your sale is made. Prove it to yourself. Put WARM MORNING Gas Heaters on your sales floor and see how they sell! The line is complete and the advertising and promotional support for WARM MORNING dealers is the strongest ever. Why wait? Write for literature and prices.*

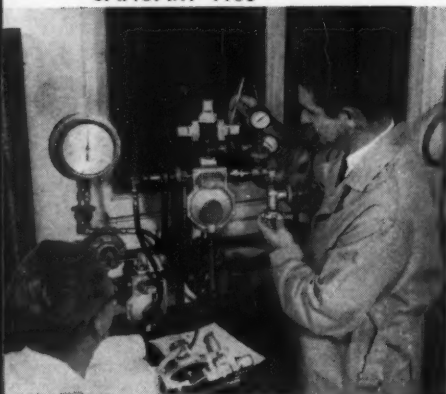
A black and white illustration featuring a Warm Morning Gas Heater on the left and a woman on the right. The heater is a rectangular unit with a glass front showing a burner assembly. The woman is depicted in a mid-century style, wearing a light-colored jacket over a dark dress and a striped scarf. She is looking towards the heater with a pleasant expression. The background is dark with several stylized starburst or spark-like patterns scattered around. At the bottom of the illustration, the brand name 'Warm Morning' is written in a large, stylized script font, with 'GAS HEATERS' in a smaller, spaced-out sans-serif font below it.

Warm Morning
GAS HEATERS

LOCKE STOVE COMPANY 114 West 11th Street, Kansas City 5, Missouri

New product's trip

JANUARY 1958



Steve Erdody, project engineer (r.) began functional lab testing under the supervision of chief engineer Lotz.

FEBRUARY 1958



The worst operating conditions the regulator will ever encounter in the field were duplicated in the laboratory. The ice chest temperature reads 60 deg. below zero.

FEBRUARY 1959



Returning with the preliminary field test results Walter Bond points out to his men where in eastern Canada they were conducted. The tests received approval by the "jury" of LPG dealers and the regulators were ready to go to market.

ment in regulator design, having to do with

- 1) Fool-proof operation
- 2) Capacity
- 3) Long life
- 4) Prevention of bleed-through during cylinder changeouts
- 5) Gauge performance and visibility and
- 6) Ease of installation and maintenance.

On Monday, Dec. 2, 1957, the design team unveiled the embodiment of its new ideas: what appeared to be two rectangular blocks of aluminum mounted on the lab flow bench.

The appearance of the device was not impressive. Neither were the initial test results. The biggest problem was in the high-pressure seating. To obtain better pressure control and positive bleed-through protection, they were trying to include the lever seating of large low-pressure regulators in the confined areas of the new automatic. But if small levers were used, the rubber seats would loosen after about 2500 cycles of operation. If the seats were firmly retained, the levers were too bulky, and operation was sluggish.

As tests and modifications of the prototype continued during December and into January 1958, it became increasingly clear that a drastic innovation was needed.

The break-through came when a process was discovered that would flow the rubber seat under heat and pressure in each die-cast aluminum lever. This provided a seat so firmly positioned it could not be pried loose in one piece with a pocket knife, yet one that would fit into our compact package.

The date: February, 1958.

The next 10 weeks were spent in exhaustive lab testing which duplicated every conceivable field operating condition: sub-freezing cold, desert heat, rain, snow, careless handling, and cycle testing equivalent to changing cylinders 100,000 times.

Sel-Pac distributors in the U. S. and Canada had their first look at the new regulator during the May, 1958, national LPGA convention. But the target date for full production was still 18 months away! For while the device now had the company's approval, it still needed approval by the Underwriters' Lab-

oratories and, most important, by the customer.

The thoroughness of Underwriters' Laboratories is typified by these two examples of tests which were conducted:

- 1) To check for leakage and strength of body, UL subjected the new automatic to pressures up to 1250 lb per sq in.
- 2) For an endurance test, the regulator underwent 100,000 complete cycles of operation without mechanical failure, impairment of operation, or leakage.

After two months' testing, UL gave its approval. In that same month—November, 1958—the first shipments were made to the field test area. The region with the most rugged weather extremes, the provinces of Quebec and Ontario in eastern Canada, had been selected for this purpose.

From the manufacturer's standpoint, there are five steps to field testing: introduction, education, installation, observation and evaluation of results. To accomplish these five steps, the Selwyn-Pacific Co. and its Canadian associates, Arden Sutherland & Son Ltd., conducted live automatic regulator clinics in 17 major L.P. gas areas, traveling a combined total of more than 200,000 miles.

As the months of 1959 passed and another winter approached, the final collection of field reaction reports showed that the new unit was performing on schedule. Apparently L.P. gas dealers had finally been given the kind of regulator they had asked for.

This phase of the regulator's development consumed almost another year and many thousands of dollars. Finally, after the "jury" had returned a favorable verdict, the first units were shipped for actual "sales installation."

It was almost three full years to the day from that Wednesday afternoon in 1956 when the investigation had been launched.

Yet the whole project could have failed if the dealers had turned thumbs down on the new product. It is the dealer himself who tells the manufacturer what he wants or needs to make his job safer, more trouble-free, and more profitable. In the end, he—not the manufacturer—charts the course of all future products for his industry. ■

E. W. Arnold, who's from Missouri, says...

**"We'll buy only Mississippi Tank
delivery units in the future"**



"I'm from Missouri . . . you've got to show me"—is a well-known phrase that points up the fact that Missourians are careful buyers. E. W. Arnold, manager of Home Gas Service, Inc., Kahoka, Mo., is no exception. Last year, when expanded business required that the company buy a new delivery, Mr. Arnold examined the features of available units and then selected a Mississippi Tank Titan, Jr.

After a full season's experience with the unit,

here's what Mr. Arnold has to say: "Our Mississippi Tank Titan, Jr. is superior to any unit we have ever owned. Its light weight allows us to carry a larger payload and its high pumping capacity—better than 50 gallons per minute into domestic systems—enables us to handle increased business with less manpower and equipment."

And to prove that he means it, Mr. Arnold adds, "When we get ready to buy a new delivery, it will be a Mississippi Tank unit!"

***For complete details on delivery units that haul more, pump faster
and cost less to operate, MAIL THE COUPON TODAY!***



**MISSISSIPPI
TANK COMPANY**

INCORPORATED

Hattiesburg, Miss.

JUniper 3-0262

Mississippi Tank Company, Inc.
Hattiesburg, Miss.

BPN-9

Without obligation, please RUSH literature on:

___ Delivery Units ___ T-1 Transports
___ Domestic and Bulk Storage Systems

Name _____

Company _____

Address _____

City and State _____



Working its way through ice jams, MRA's self-propelled barge, "The Beaver," operates around the clock during the two months after other shipping has ceased, but before the Straits of Mackinac freeze up for three months. It has carried over one-half million gal. of propane during the past four winters.

One of the many Mackinac miracles:

Providing propane for MRA

A BPN Exclusive

COLORFUL MACKINAC ISLAND, situated in the "Straits of Mackinac" which split Michigan's "mainland" from the Upper Peninsula, is today the ideological war college for the free world. Since 1942, it has been headquarters for education in the Moral Re-Armament movement. Here MRA holds conferences every summer and trains men to carry on the ideological fight against Communism.

Since the island was set aside for MRA, German Chancellor Dr. Konrad Adenauer, former Foreign Minister Robert Schuman of France, Prime Minister Kishi of Japan, the Shah of Iran, the late President Magsaysay of the Philip-

pines, and other heads of state from every corner of the free world have come personally or have sent cabinet members and delegations to its World Assemblies. The Army, Navy, and Air Force have sent top ranking men from Washington.

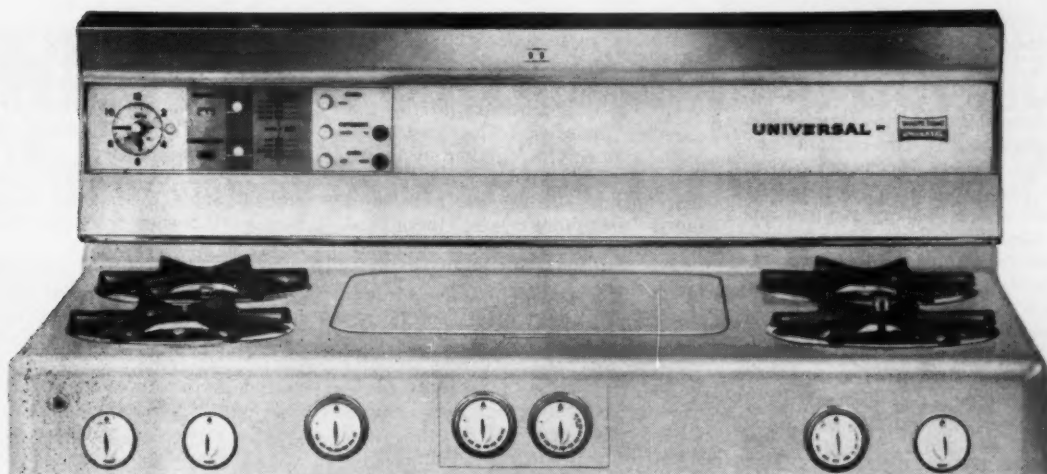
Today, MRA has many fine facilities. Twelve-hundred people can be looked after daily during a year-round operation. A modern theater provides the stage on which ideological dramas and musicals are created and staffed to go around the world as unique and effective ideological weapons. A television film studio, recently completed, is one of the three largest in America.

Now an undertaking of this magnitude demands a modern fuel.

ALEXANDER DRYSDALE

Supervisor, Moral Re-Armament

LPG Installations



Introducing...a new range of ideas: The new UNIVERSAL by WASTE KING UNIVERSAL. Dreyfuss-designed to look better—a new shape to the burner grates...new back guards with a look as fresh as tomorrow. **New** Totally NEW...with design by Henry Dreyfuss, world-famed industrial designer. Fresh designs that have already received wide ac-

claim from professional design groups. WASTE KING UNIVERSAL-engineered to cook better—smart, work-saving features with traditional Timer...push or type of minutes oven Proof, Flare-



“Swirl-Design” that keeps grease from smoking and flash point. Complete choice of burners: Double-Duty unlimited flexibility, “Burner-with-a-Brain” (A.G.A.

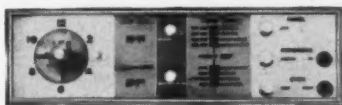
Universal quality. The automatic Roast Guide & Oven button easy, controlled meat. “Air-Conditioned hot spots and cold cor-

Proof broiling with



by time, size Baking” elimin-ers. Smoke-exclusive reaching the burners with Trademark).

Exclusive Obedient It's a complete line Star Award 40" Im-

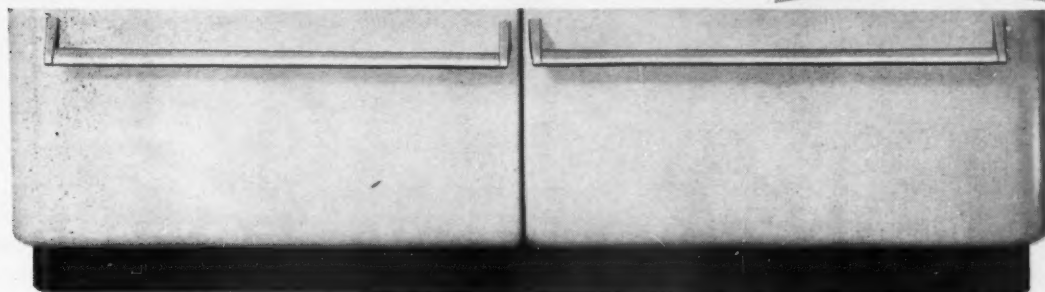


conscious budget. And we're backing the line with complete merchandising packages, including colorful point-of-purchase, and hard-hitting advertising.

For complete information, call or wire collect or write today to: WASTE KING CORPORATION, Los Angeles 58, California.

Burners with precision-point flames. with 21 LP models from the big, Gold perial to models for the most penny-

**WASTE KING
UNIVERSAL**



Mackinac Island

Kitchen and laundering appliances draw a total of two-million Btu per hour. Three Kewanee boilers, which provide steam, hot water, and hot water heating require another 15-million Btu. Propane was the natural choice. But transporting it onto the island, and handling it there, posed difficult problems.

Presently we shall see why—and how the surmounting of these barriers became known as another of the "winter miracles of Mackinac." Summer months on Mackinac have always been fully committed to maximum ideological training and action.* This leaves only winter months free for the construction of facilities. But the waters of the Great Lakes become violent as winter approaches. Massive ice floes grind to a halt with ice up to 4 ft thick forming in the straits. For three months the island is isolated, its only link being small ski-equipped aircraft which lands at the lakeside.

The fuel requirements of MRA

* Written in September, 1959, the Manifesto "Ideology and Co-Existence," has gone to 86 million homes across the world in 24 languages.

continued to increase rapidly. Yet because of the transporting difficulties, LPG had to be brought over in 100-lb cylinders during the summer months. The cost was high, and as the number of cylinders mounted—up to 52 in-place installations—it became more and more uneconomic and inconvenient. Bulk storage would be ideal, it was felt, and during the years of growth was often considered. But it was always rejected as impractical.

That was the situation in the fall of 1957 when a covey of chartered planes flew in from major U. S. cities, Asia, Europe, and Africa for a weekend conference. On board were UN dignitaries, industrialists, labor leaders, and propane engineer John Durney, assistant district manager of Suburban Propane Gas Corp.'s Mt. Kisco, N. Y., district. Even before landing, Durney agreed with the "impossible" verdict as he eyed the open stretches of water.

But he found the weekend so inspirational that he decided to take a closer look at the island's facilities. MRA had a self-propelled barge called "The Beaver" and this appeared to be the main hope for getting propane. Durney consid-

ered loading it with skid tanks or a number of 1000-gal. tanks on wheels. He also inspected and measured the barge with the idea of bolting down railroad tracks and transporting an entire railroad carload to the island. He concluded that a regular highway transport trailer would be the answer.

Realizing the urgency of the situation, Durney returned the following weekend with plans and specifications for the complete installation. Immediate orders were placed with Anco Manufacturing & Supply Co. for the tanks and fittings. At the same time, propane was ordered from Pure Oil Co.

Time was growing short. The first ice floes had already appeared when J. Ed Nelson of Pure Oil and Wallace Hardin of Anco arrived with the equipment. Moral Re-Armament's crane swung a 12,000-gal. tank from the deck of The Beaver and placed it on new dock-side piers. In three days, the installation was ready to receive the first 10,000 gal. of bulk LPG ever to travel the Great Lakes.

Meanwhile, on the mainland, a transport trailer secured by Durney in New York had left the highways forever, fitting easily on the

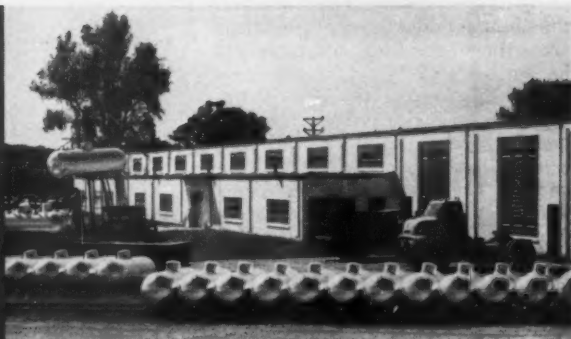


Here's an aerial view of the MRA training center. Note the huge television studio which was under construction when this photo was taken last winter. Sharp-eyed LPG men can easily tell which of the two 30,000-gal. tanks (lower right hand corner) has its vapor supply valve active.

Where else so complete a service for ALL your bulk plant needs?



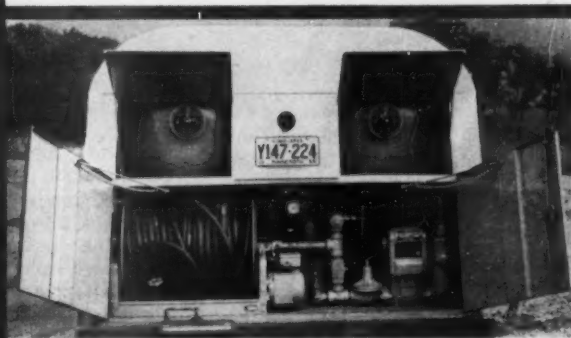
Best-quality NGAA-specification fuel, plus *assured* on-time delivery.



Complete warehouse stock of LP-Gas parts and equipment, for immediate service.



Complete line of "Topper" Systems, quality-built for lifetime service. New endmount systems available.



"Speedloader" trucks in 3 sizes, and United "Hitch-Hiker" trailers.



Engineering and technical services, including design and construction of complete bulk and standby plants.

On the way: Pipeline LP-Gas!

Early this winter, United will have new LP Gas pipeline terminal facilities in Iowa, Wisconsin and Minnesota to further expand our transport service to dealers in these states.

For a worry-free winter, rely on United service for ALL your bulk plant needs.



UNITED PETROLEUM GAS COMPANY

4820 Excelsior Blvd., Minneapolis 16, Minn. • WA 7-9981

Mackinac Island

spacious deck of the *The Beaver*, where it was fastened with chocks and tie-down cables. Equipped with a new Corken 290 compressor, it became self-operative. Thus, it could pick up loads anywhere along the coast—an important factor because ice jams constantly vary the navigability of mainland harbors.

The *Beaver* and its propane-toting, piggy-back trailer-partner immediately began filling the big bulk tank. The timing was perfect, for the last loads were brought in just before the Straits of Mackinac froze up for the '58 winter. During this period, Nelson and Hardin spent their evenings training personnel to use LPG with the help of "Pamphlet 58" and BPN's "Handbook of Butane-Propane Gases."

With bulk LPG on the island, drastic changes took place immediately. The cooking and laundering facilities were oversupplied, so one of three 5,000,000-Btu boilers was converted from coal to gas. Several 500-gal. and 100-gal. tanks were brought across the frozen lake to serve a dozen outlying facilities around the island via numerous two-stage-regulated, low-pressure piping systems.

The bulk propane experiment was such a success that, after a consultation with Durney, a new 1,600,000-Btu Cleaver-Brooks pack-

aged boiler was added to the system. This led to plans for two more storage tanks—this time big 30,000-gal. models.

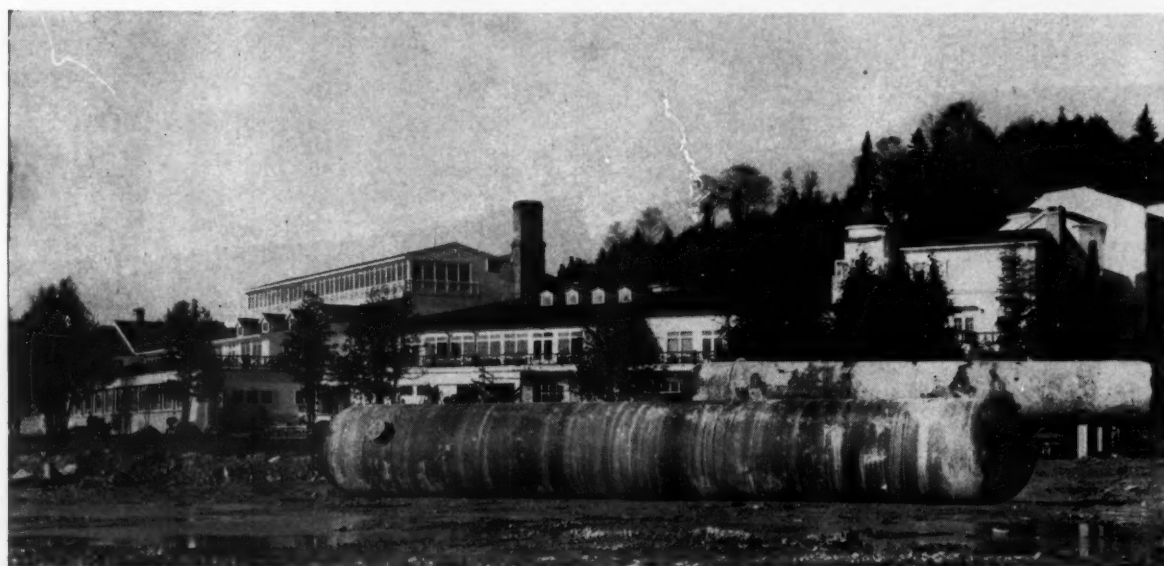
However, late fall production work on an MRA movie held up installation of the tanks because key scenes were to be shot on the site chosen for the tanks. When the cameras stopped, a long distance call to Anco sent the tanks on their way northward. They were delivered at a dockside in St. Ignace, Mich., being rolled off flat cars into the water. The *Beaver* then towed them to the island.

Out of scenic considerations, the two big tanks were installed 1700 ft from *The Beaver's* docking area. This meant a product transference problem—since island tradition prohibits using motor vehicles—including LPG transports. The answer was a 1700-ft underground pipeline tying the twin 30,000-gal. tanks to the 12,000-gal. dockside tank.

With ice gathering in the straits and seven carloads of LPG on the way, an around-the-clock battle began. Jackhammers chewed at the frozen earth and stretches of bed-rock, but the newly made ditches quickly filled with groundwater and snow and froze. Sections of Schedule 80 pipe were welded together—2½-in. pipe for the liquid line, and 1½-in. for the vapor return line. Leftover building materials were used to protect the pipe. Two alternate layers of roofing plastic were applied by hand between longitudinal strips of polyethylene and roofing felt.

The original 12,000-gal. tank at the dock serves as a staging tank for the two big tanks. A special 3-in. unloading header enables *The Beaver* to do a ship-to-shore transference to any or all of the three tanks in minimum time. Incorporated in this header is a 3-in. back-flow check valve—an extra safety feature to protect the water-going transport trailer from the 585 gal. of LPG in the 1700 ft of 2½-in. pipe when transferring liquid from the barge directly to the larger tanks. A Corken 290 electrically-powered compressor is located at the dockside tank. A 100-gal. condensate receiver just ahead of the compressor is a must, since there is excessive condensation as vapor is drawn 1700 ft.

Usually, the staging tank is emptied down the line ahead of the arrival of the barge to make space for a closer-in, and therefore higher, pumping rate. When the lines are not in use, provision is made for the liquid locked off in the pipeline to be consumed in the vapor return line via the condensate receiver, which then serves as a batch vaporizer. First stage regulators on the 12,000-gal. tank automatically open as line pressures drop below 30 psi, insuring uninterrupted service as the liquid line dries out. The regulators are protected during dumping from the higher pressures by back-flow check valves. When not in use, the 30 psi vapor pressure in the lines is locked off and pressure gauges on both lines give a perpetual



One already up on its piers, the second ready to go up, the two 30,000-gal. tanks are shown during their installation. They were rolled off flat cars into the water at St. Ignace, and towed to Mackinac by *The Beaver*.



Meet B. L. Hankins and Owen Caplinger

B. L. Hankins, President, Hankins Appliance, Inc., Jett, Ky.

Owen Caplinger, Secretary-Treasurer (standing)

15 years a Shellane Distributor—with a perfect delivery record

Today, they operate one of Kentucky's most successful Shellane® Distributorships—Hankins Appliance, Inc.

As Mr. Hankins puts it: "Those early days were a tough struggle . . . and believe me, we couldn't have come this far if it weren't for the help and counsel of Shell Marketing and Engineering Personnel. They helped us tremendously." Mr. Caplinger

adds: "We've learned over the 15 years that Shell will contract to sell propane only within its capacity to supply. Shell has always maintained a 100% delivery record."

From its plant at Jett, Kentucky (two new ones are under construction—four more in blueprint stage), Hankins Appliance supplies Shellane for 4850 consumers in twenty counties. They operate a fleet of nine

trucks, equipped with 2-way radios.

For ten years, Mr. Hankins has been an active member of the Kentucky LP-Gas Association, and is currently its President.

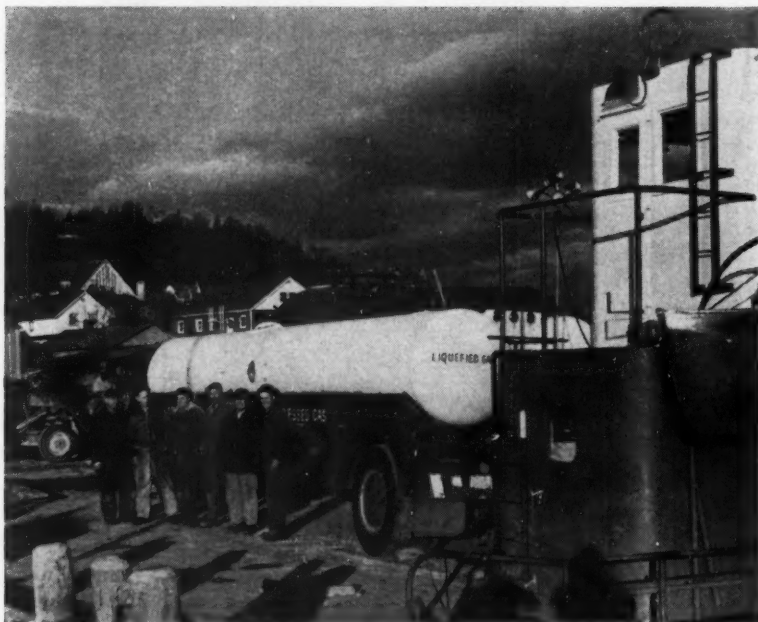
Mr. Caplinger has served on the Frankfort School Board for 23 years and is currently a Director of the State National Bank at Frankfort, a position he's held for 35 years.



It pays to be a Shell LP-Gas Distributor

—and your nearest Shell office will be glad to tell you why. Ask for the District Manager.





The Beaver is shown in close-up with its piggy-back transport trailer as the unique pair completed their very first voyage together. Second and third from right (respectively) are Anco's Wallace Hardin and Pure Oil's J. Ed Nelson.

check for a leak-indicating pressure drop.

A pale blue enamel "Equipment by Anco" sign hangs on the Cyclone fencing alongside the required fire extinguishers and "No Smoking" signs. During a recent visit, a Michigan State official said: "This is a model installation. I am going to tell people to see this if they really want to see how to do it."

The entire installation is Anco equipped from storage tanks to the last Rego valve. It exceeds Pamphlet 58 requirements on several points, such as safety relief valves between shut-off valves on vapor lines as well as on liquid lines. This provides a positive precaution in case of excessive condensation along the extended vapor return line — due to pumping and extremely cold temperatures.

All openings and hoses have maximum possible protection with careful placing of excess flow and back-check flow valves throughout. At no time are fumes allowed to escape into the air, even during pumping operations. The liquid and vapor hoses are so equipped and valved that when closing down a pumping operation, valves supplying liquid may be closed and vapor forced through the hoses blowing them clear of liquid. The valve receiving liquid is then closed, the

compressor reversed, and pressure in all hoses is reduced to zero by the retrieval action of the compressor. The blow-down valve gives a faint sigh when finally opened. This was engineered to give The Beaver the fastest and safest turn-around as well as to eliminate waste.

Maximum versatility is provided through a system of piping, by-passes, and back-flow check valves. Liquid may be transferred in any direction between any of the three storage tanks and the truck transport. Conveniently placed Anco flow indicators tell what is happening in the system. Vapor may be consumed from any or all of these four units through an existing first stage (20 psi) service line or via the high pressure vapor-return line. The vapor-return line can be converted into a low pressure (30 psi) gas main servicing the 12,000-gal. tank by valves which by-pass the twin 30,000-gal. tanks and go directly into the 20 psi regulators which usually serve those tanks. As higher pumping pressures dwindle in the vapor-return line, the 30 psi regulators open, supplying 30 psi of vapor to the waiting 20 psi regulators 1700 ft away.

These lower pressures avoid condensations due to severe cold weather. Also, this arrangement enables the operator to elect to consume from any tank without hav-

ing to rush down the shore, hurriedly opening and shutting valves. Such versatility also means economy: it has not been necessary to invest in a vaporizer because ample vapor is always available to cut in if pressures get low.

Also, there is a minimum use of compressors—as any tank may be filled by throwing the load of consumption on that tank. As temperature and pressures drop, differentials develop—often greater than can be supplied mechanically. One need only open the liquid valves. Further, as pressures tend to equalize, additional boost may be given by allowing warmer and higher pressures from a dormant third tank to impinge on the vapor space of the tank being unloaded. Likewise, 500-gal. tanks can be filled by valving in the vapor-return hose to a low-pressure area in the system, and the liquid hose to the liquid section of a warmer- and higher pressure-tank. Similarly, when transporting liquid from the mainland, the smaller dockside staging tank is made to support the consumption load of the whole system with a resultant severe chilling, gathering sometimes up to ½-in. of frost in mid-summer.

When The Beaver ties up with a new load of product with Texas temperatures, the transport will often blow itself empty, equalize out, and return to the mainland with the lower island pressures. It can then take on a large percentage of its next load without pumping. When thermal conditions are not so obliging, both the dockside compressor and its sea-going mate can operate in parallel to insure maximum pumping rates.

This "Miracle at Mackinac" skyrocketed LPG from 100-lb cylinders to a total of over one-half million gal. consumption in the last four years. It was possible only because personal sacrifice and commitment were added to the boldness of the adventure. John Durney's gift was his skill and engineering genius. The careful, constant surveillance of J. E. Nelson of Pure Oil meant frequent visits to the island to assist and supervise. All this had the solid support of Anco, which—in an isolated area of total inaccessibility—helped create these amazing installations in record-breaking time. Finally, the men of Moral Re-Armament, working without pay, around the clock, in bitterest winter conditions, in the race against time, finished the living proof that free men can and will fight for a big-enough idea. ■



**PRICED RIGHT
QUALITY BUILT**

EVEREADY PROPANE GAS SYSTEMS

TRINITY gives you domestic systems built to exacting standards at low prices because Trinity uses "Assembly Line" factory techniques. Six sizes: 110 through 1000 W. G. Splash filling — Low silhouette — Fast truckload deliveries. Built to 1959 ASME code, 250# WP.

TRINITY STEEL CO., INC.

4001 IRVING BLVD.

FRANCESVILLE, INDIANA

DALLAS, TEXAS

WHEN IN MEXICO CITY, VISIT TANQUES de ACERO TRINITY, S.A.

Fleetwood 7-3961



management portfolio

"Do a pioneering job in your advertising"

"We feel that there are too many dealers who are helping the electric and oil businesses by not doing a first class job of advertising," wrote Robert E. Littell of Littell's Gas Service Inc., Franklin, N. J., in a letter to the editor earlier in the year.

So when BPN held its annual sales roundtable in Chicago late in April, we asked Littell to amplify his remarks a bit—and tell us more about his company's advertising activities. Excerpts follow:

WE IN THE GAS INDUSTRY look at our industry in the same way the farmers look at theirs. They all sit back and agree on everything but we can't get together to do anything.

BPN SALES ROUND TABLE

We are not going to sit back and wait for everybody to decide what to do. We have to do them ourselves, even if we have to be pioneers; so we decided to be pioneers in advertising in our area.

Advertising, to our way of thinking, is the only way to combat three major competitors — electricity, fuel oil, and 'deadbeat' gas dealers. (I think deadbeat gas dealers are just as bad as the other types of competition.)

One of the things we have used for advertising is match covers. A lot of people may have forgotten about match covers, but they do have a flame and they tie in well.



Bold newspaper advertising stresses "gas is best" not "gas is cheaper," Robert Littell told his listeners at the BPN Sales Roundtable.

People use matches day in and day out. On them is a picture of our cylinder truck. We also use the same picture on billboards. It is very effective.

We serve only about 2200 customers, but we spent \$3587 last year on advertising. (This is about two per cent of gross income.) We spent \$685 on matches, \$1000 on highway billboards, \$152 on truck sign lettering, \$1100 in newspapers, and \$77 on radio. The rest was spent on high school yearbooks and other miscellaneous things.

We use cooperative advertising. We also use AGA truck cards. Every month we use a new card if we can afford it. If we can't, we use the same one for two months.

We feel that the money we spend on advertising should be spent in the best way possible, and not on cheap ads. We're not trying to sell

the customer on the fact that gas is cheaper, but on the fact that gas is best. I think that's one of the drawbacks of the industry; for years everyone has been telling the customer that we've got a cheap range, for \$159, and she can go ahead and start cooking on it. The electric boys are selling \$350 and \$400 models, and they are selling the best range the customer can afford. If you can't reach the customer on price, you can reach him on quality. We've tried it both ways and we're convinced that quality is the best way.

We also ran a small ad in which we said that gas outsold electric water heaters 3 to 1 in 1957.

In our advertising this year, we used a slogan, "Face the facts — don't get caught with your wires down." We have to have a good slogan that gas is still here, that it's modern, and that it is here to stay. ■



"Don't forget match covers," Littell advised. Littell's spends hundreds of dollars per year in this medium.

"We're Closing 7 out of 10 Premium Sales..."

reports
MR. RON ECKLES, Sales Manager
C & H Home Service
Des Moines, Iowa

...with the

Permaglas® Magic-Heat STORY!



"As a *Permaglas* heating dealer, we're able to offer our customers a great big *plus* when it comes to comfort," says Ron Eckles, "but comfort can be a pretty hard thing to describe... much less prove. That's where our 'old reliable' *Magic-Heat* demonstrator takes over."

And how it takes over! Since taking on the *Permaglas* line and building their sales presentation around the *Magic-Heat* demonstrator, Ron Eckles and his crew have been signing up 7 out of every 10 prospects. Even last January (normally a slow month), C & H sold 18 *Permaglas* installations... every one a replacement and every one at full profit. "About the only thing our *Magic-Heat* demonstrator won't do," declares Ron Eckles, "is sign the order."

Magic-Heat, of course, is A. O. Smith's exclusive method of assuring uniform indoor temperature and near-continuous air circulation by actually "tuning" the flame higher or lower in response to constantly changing heat losses. As an important consumer benefit, *Magic-Heat* puts *Permaglas* winter air conditioners in a class by themselves. As a valuable selling feature that can be easily and dramatically demonstrated, it's unbeatable.

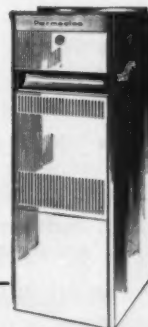
You, too, can turn lookers into buyers... convert price-shoppers into quality-conscious customers... when you make *Permaglas* your profit line for the '60s. See your nearest *Permaglas* Distributor or return the attached coupon without delay.

This impressive device, available to all *Permaglas* warm air heating dealers, enables Ron Eckles to simulate the actual operation of a *Permaglas* winter air conditioner with *Magic-Heat*. The gas flame is automatically lowered as the heat-sensing element is warmed in Mr. Eckles' hand... rises again as the bulb is allowed to cool. The *Magic-Heat* demonstrator (equipped with a handy carrying case) is compact enough to be taken into customers' homes, and includes blower, thermostat, controls and other operative components.

Permaglas gas-fired winter air conditioners are available in a full range of sizes and styles... Hi-Boy, Lo-Boy and Down-Flow. *Magic-Heat* is optional with all models... for use with all gases, including LP.

Through research... a better way

A.O. Smith
CORPORATION
PERMAGLAS DIVISION
KANKAKEE, ILLINOIS • NEWARK, CALIFORNIA
A. O. Smith International S.A., Milwaukee 1, Wis.



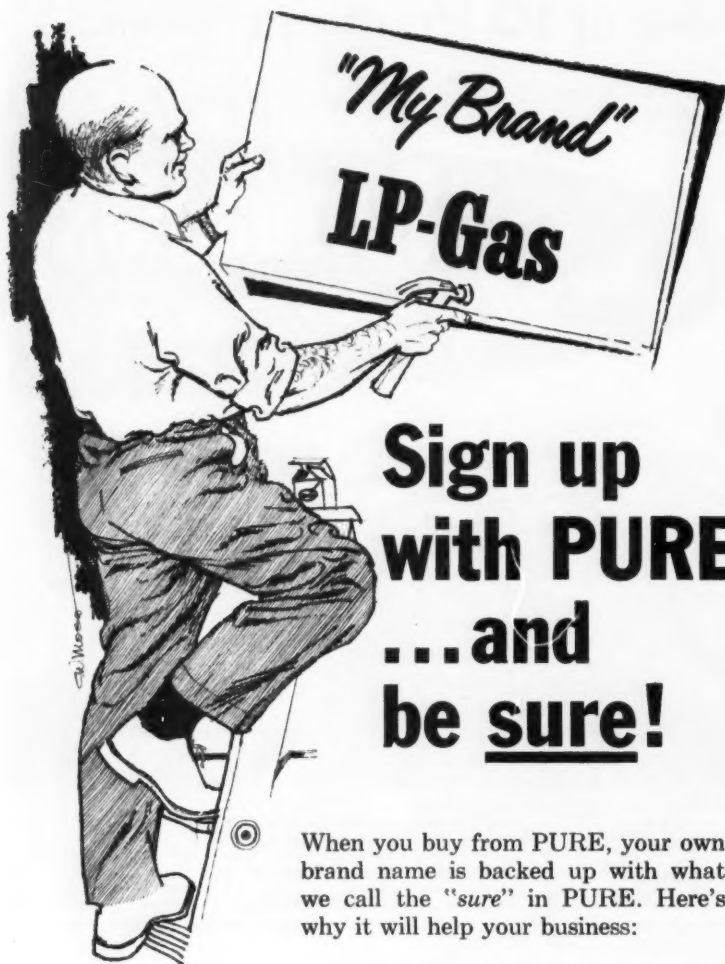
A. O. SMITH CORPORATION
Permaglas Division, Dept. BPN-960
Kankakee, Illinois

Gentlemen: Please send me full information on *Permaglas* gas-fired winter air conditioners with *Magic-Heat*.

Name.....
Company.....
Type of Operation: ☐ Heating Contractor ☐ Heating Wholesaler
☐ LP Gas Dealer ☐ Other (specify).....
Address.....
City.....Zone.....State.....

makers of
famous

Permaglas® glass-lined water heaters, warm air and hydronic heating equipment



Sign up with PURE ...and be sure!

When you buy from PURE, your own brand name is backed up with what we call the "sure" in PURE. Here's why it will help your business:

- You buy direct from PURE, producer of its own LP-Gas. And our production is increasing!
- You buy a product with rigidly controlled quality.
- You're assured of a constant source of supply from PURE's huge underground storage facilities.
- You get dependable, on-time delivery by PURE's own tank car fleet, and by transport trucks.
- You sell these product-supply features and services under your own brand name, without competition from PURE.

For all the facts about why you can be sure with PURE LP-Gas, just call or write the Pure Oil office nearest you.

The Pure Oil Company, 35 E. Wacker Drive, Chicago 1, Illinois • Worland, Wyoming, Box 38 • Minneapolis, Minnesota, 825 Thornton Street, SE • Fort Worth, Texas, Fair Building, Box 2107.



BE SURE WITH PURE

Premium gifts bring Pee Dee new customers

To BUILD its replacement-appliance business, Pee Dee Gas Co. Inc., Georgetown, S. C., utilizes its monthly billing statements as advertisements. This idea has also paid off in new customers for the company.

Pee Dee, a branch of the parent Conway, S. C. firm, offers a premium valued at 8 to 10 cents to customers who pay their bills by the 10th of the month. A higher-priced premium, such as a chicken fryer, tea kettle, or cylinder of gas, is given to customers who recruit new customers.

THIS IS YOUR PERSONAL GAS STATEMENT
FOR GAS USED IN THE
MONTH OF _____, 19____
PLEASE PRINT OR TYPE
Name of Person Gas account is connected to _____
City _____ State _____
Apartment _____
No. _____
Street _____
All amounts due and payable in full on or before the 10th of the month shown above.

Free
Birdbath
Mirror

To Accounts
Paid By 10th

— Truck Load Sale —

Build-In Ranges
Apartment Ranges

Deluxe Ranges
Standard Ranges

Pyrofax Gas Ranges

TRADE NOW

No Down
Payment

Low Monthly
Payments

We Are Loaded — We Must Sell!

YOU NAME IT — WE HAVE IT

OUR PYROFAX GAS RANGES FEATURE:
Lifetime Burner Guarantee • Thermostatic Top Burners
Infra Ray Broilers • Cancer-Saving Burners • Clock • Controlled Ovens
Automatic Griddles • Easy Flip Open Burner
Motor Driven Rotisserie • Automatic Dials

Pee Dee Gas Co., Inc.
Georgetown, S. C.

Pee Dee's service and delivery men, when conversing with customers, frequently mention the premium available to persons who send new customers to them. This way, the customers are always on the lookout for prospects, and know they'll get something in return. A good way for them to be sure of a premium is to give a friend or neighbor the bottom portion of their statement, which carries the advertising message, instead of discarding it.

Courtesy "Pyrofacts"

BUTANE-PROPANE News

Martin High Fidelity Heat

is 1960's Most Effective Gas Heater Salesmaker
ARE YOU TAKING ADVANTAGE OF IT?



If not, better find out how much Martin High-Fidelity Heat can mean to your customers in added comfort and increased economy ... and to you in added sales

For the full story on Martin High-Fidelity Heat, Martin Continental Console Cabinet design, and the most complete and saleable line of gas heaters in America, write for catalogue today.



AMERICA'S MOST COMPLETE HEATING LINE

How you can reduce taxes by equalizing your income: Part 1

A low-profit year and a high-profit year can sometimes be balanced out in your tax calculations in such a way as to save you money. This can be done in two ways—by shifting receipts and by shifting deductions.

**COUNSEL
AT YOUR
ELBOW**

In this first installment of a two-part series, BPN's tax expert, E. H. Mitchell, discusses the former method.

EQUALIZING TAXABLE INCOME from year to year can save you money. This is particularly true when your annual receipts fluctuate. The greater the difference and the higher the larger year's tax bracket, the more you can save.

Equalization by timing is accomplished by shifting receipts or deductions from one taxable year to another. The methods are:

- 1) To switch receipts from high to low income years and
- 2) To shift deductions from low to high income years. Techniques are varied and numerous, and are available to individuals, partnerships and corporations.

To take advantage of this tax-saving idea, you must make profit estimates and comparisons just before the close of each current year.

For example: You are an unmarried individual or partner and file separate returns each year. In one of the two years, 1960 and 1961, your taxable income will be \$16,000 and in the other it will be \$34,000, or a total for the two years of \$50,000. If you allow this to stand "as is," your taxes will be \$5200 for the low year and \$15,760 for the high year, or a total for the two years of \$20,960. However, if you throw a portion of the high income into the low year so that the two become about equal, then your tax for the two years will be \$20,300. You will

have saved yourself \$660. If you are married and file joint returns, and income figures are the same, the same strategy will save you \$820. The higher the income, the greater the savings.

Corporations pay a normal tax of 30 per cent on their first \$25,000 of taxable income and a normal and surtax, totaling 52 per cent, on any excess over \$25,000. Hence, they can also save if they can equalize their annual earnings at the \$25,000 maximum.

Let us look now at the first method of saving taxes (controlling receipts) and see how it may be done.

In examining net receipts (as distinct from deductions), we shall first assume that in the pertinent tax year, 1960, they are abnormally low. Next we shall assume that this year's net receipts are abnormally high.

Low earnings this year. If profits are unusually low this year but are expected to be high next year, you should try to collect in this year some of next year's receipts.

Income of a cash-basis taxpayer can be increased this year by hastening collections from customers.

Sales by accrual-basis taxpayers are income for tax purposes when they are completed—that is to say, when title passes under your state law. Title usually passes upon delivery. Delivery is usually evidenced by invoice or bill of lading. Hence you can increase this year's income by speeding up deliveries.

If you ordinarily sell on consignment, shift some of next year's receipts into this year by switching to an open-account basis of sale.

As a salesman you might be able to talk your employer into making advances near the end of this year

on account of next year's commissions.

Offer discounts or premiums for closing "approval" sales before the year's end; and accept unconditional advances and deposits. If they are not injurious to business, solicit them.

You might, near the end of this year, sell installment accounts and notes receivable, and offer discounts for advance payments.

High earnings this year. If profits are abnormally high this year and are expected to be substantially lower next year, the above tactics should be reversed. Equalize earnings for the two years by pouring some of this year's receipts into next year.

For cash-basis taxpayers, this year's income can be reduced by letting payments take their normal course, or by delaying in billing, or by persuading year-end customers to either:

- 1) Postpone payment till early next year, or;
- 2) Delay their orders until after the close of the current year.

If possible, sell options to purchase on or before a named date next year. They serve to delay receipts until either the options are exercised or the payments forfeited.

If you are on a cash basis, welcome oral promises to pay as well as non-negotiable promissory notes payable next year. Neither is taxable until something of marketable value is received.

If you are an accrual-basis taxpayer, postpone deliveries until the first of next year.

If possible, switch what normally would be year-end, open account sales to sales "on consignment" or sales "on approval."

A salesman on a cash basis might persuade his employer to postpone the payment of his year-end commissions for a month or two.*

Avoid year-end sales of accounts and notes receivable. Wait until next year.

Reducing taxable income by equalization is more easily accomplished by control of deductions than by control of receipts. Deduction control will be treated in next month's installment. ■

* See last May's article treating "Postponed Compensation."



Now **MASTER TANKS** are filled **FASTER**



Master Tanks keep pace
with larger pumping
equipment now
used on propane
delivery
trucks

Now, all domestic tanks produced by Master Tank & Welding, Dallas, Texas, and Quincy, Illinois, will feature a new Multi-Valve® with a separate fill valve. This allows a much faster filling rate than any current Multi-Valve®.

This system utilizes splash filling, which creates a refrigerated condition and reduces the vapor pressure. Then tank can be filled without using a vapor return hose. Also, the direct flow on the separate fill valve cuts friction to a minimum

and reduces the strain on the truck pump. Rego engineers, in conjunction with Master engineers, have designed this new Multi-Valve® for the exclusive use of Master Tank & Welding. It cuts the time of each delivery stop and increases the number of calls each truck can make in a day. All this adds up to greater PROFITS. Another improvement has been to add a check lock to the bottom of the tank for liquid withdrawal.

LISTED WITH UNDERWRITERS LABORATORIES INC.



MASTERPIECES OF
STEEL FABRICATION



2000 S. Front St. • Quincy, Illinois • Baldwin 3-5014
P. O. Box 5146 • Dallas, Texas • Riverside 7-2441



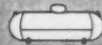
TRANSPORTS



TANK TRUCKS



STORAGE



DOMESTIC



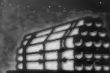
FILLING STATIONS



FARM CARTS



REFINERY



LINE PIPE



Miss Eskimo and three Midwest L.P. gas dealers discussed the many advantages of LPG and the wonders of the far North on an appearance on KPLR-TV, St. Louis. The National LP-Gas Council arranged the interview during the Mo-III convention. From left to right are: W. A. Schuette, Hausgas Inc., Washington, Mo.; Miss Eskimo; O. E. Mueller, A-I Gas Co., Valley Park, Mo., and R. M. Hemphill, Skokie Valley Urban Gas, Skokie, Ill.

Missouri LPGA lives up to "Progressive Association" motto

"A PROGRESSIVE ASSOCIATION for Mutual Dealer Benefits." That's the slogan of the Missouri L. P. Gas Association and it certainly seems to be living up to it. It is doing many progressive things and its dealers are certainly benefiting.

As a matter of fact, Missouri LPGA soon will have "one of the most complete benefit programs of any L. P. gas association," in the words of executive secretary Leland Schmidt. The group already has a good program, but a second one will be added. The double-barreled approach is aimed at giving dealers the best possible employee-employer relations and the most stable work force possible.

The association already has nearly 300 participants in its group life insurance and hospitalization program. Briefly, this program enables small dealers to offer their employees the kind of benefit program offered by large companies. Now, the association is initiating a group retirement program that

will enable a small dealer to offer a complete benefit package that will be better than that of many larger companies.

Another indication of this progressive spirit was the Second An-

nual Missouri-Illinois L. P. Gas Exposition, held in St. Louis in mid-June. As indicated in the story on the Illinois LPGA in July BPN (page 90), it was the Missouri group that originated the idea of a joint trade show and invited its sister state to attend. Held in 1959, the first Mo-III get-together was such a success that the Missouri group changed its original plans to hold the 1960 event in Kansas City. And, the 1960 event turned out to be such a success that the two associations decided to make the joint effort an annual affair.

Attendance was up 18 per cent to 800, but the real proof of success was the trade show. A total of 65 exhibitors took part and total sales recorded amounted to \$250,813. While that figure "far exceeded" the association's expectations, the actual sales were even higher, for some sales were not recorded.

To record sales, the association set up a "Stock Exchange" panel, as shown in the accompanying illustration. Bona fide purchases were registered by a convention committee official in attendance at the Exchange. For every \$25 of his purchase, a dealer received a share of stock (a chance). All shares were placed in a sealed vault. A drawing was held on the final night of the convention and the winner received a \$500 bill. (For the record), he was Frank Mangold, LO Gas Co., Lake Ozark, Mo.)

Since the rules required the win-

Here's the "Stock Exchange" panel that helped sell one-quarter million dollars worth of merchandise to LPG dealers during the recent Mo-III Exposition.



Max Wander, Wander Sales Co., McKeesport, Pa., gets details of the new Fall, tested, traffic-building program from Guy Spezza, sales representative, J. A. Williams Co., Pittsburgh.

PROGRAM WITH HAMILTON ... a promotion-powered plan to put profit in your pocket!

The Hamilton program for dealer profit consists of a constant parade of proved promotions, all oriented on the same objective... *more store traffic.*

The whole package for Fall is wrapped up in the new Hamilton Promotion Kit. Persuasive tie-in ads, hot tips on store promotion, tested traffic flags... everything you need is there. Get your Kit, at once, from your Hamilton Distributor and get into the pattern that's *already* a proved moneymaker.

You and Hamilton, programming together, can put the prospects on your floor. With that done, it's *Hamilton's buy-appeal features* that will help you to send them out sold.

When it comes to LP Gas Appliance Business

YOU'RE A STEP AHEAD WITH HAMILTON

Hamilton

AUTOMATIC WASHERS • AUTOMATIC CLOTHES DRYERS • HAMILTON MANUFACTURING COMPANY TWO RIVERS, WIS.



Mammoth 35" x 66" towel offer heavily promoted by Hamilton full-color and black and white ads in many markets... and they carry your specific store name! It's the latest in Hamilton's calendar of tested promotions.

Associations

ner to be present at the drawing, dealers unable to attend did not record their purchases. However, this meant little to satisfied exhibitors who have sent the association considerable "fan mail" with phrases like "excellent results" and "many new customers."

Plans are already being made for the 1961 trade show. Says Missouri LPGA: "The Stock Exchange is a sure bet for next year, prob-

ably with a larger cash prize for another lucky winner. A goal of \$500,000 in merchandise seems a real possibility."

A particularly well qualified slate of officers took over during the meeting. The new president is Orval Ricks, three-time mayor of Winfield, Mo., and an LPG man since 1941. He owns and operates Rick's Store in Winfield, an updated version of the old fashioned general store, where he employs 15 persons, and sells bulk and bottled gas and gas appliances, among

other things. Ricks has held several association posts, including chairmanship of the first Mo-III Exposition.

The new vice president is Wayne Werges, proprietor of Elsberry Gas Co., Elsberry, Mo. In the business since 1944, he is a proponent of the degree-day delivery system and two-way radio to speed service. Werges has employed and trained a specialist in motor fuel and crop drying and has carried out extensive campaigns to promote off-season loads.

The new treasurer is Jack T. Masters, in the business since 1946. He is a past director of the association and has served on many of its committees.

At the same board of directors meeting that elected new officers, a new executive secretary was also chosen. He is Leland W. Schmidt, a 29-year-old ex-football coach who left the St. Louis district office of Phillips Petroleum Co. to take the job. Schmidt succeeds D. M. "Buck" Orcutt, who returned to his old post temporarily when his successor resigned last spring. Orcutt had been with the group a total of eight years, was honored with a diamond tie-pin at the Mo-III meeting.

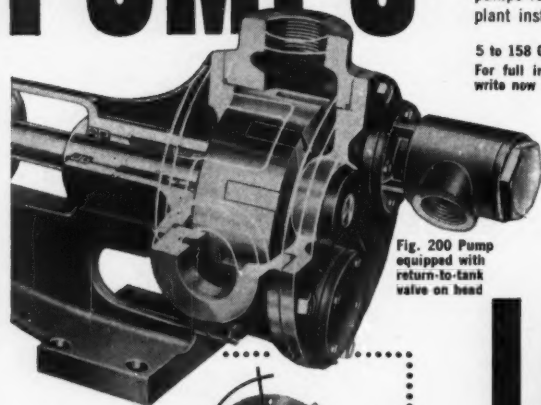
In the future, Missouri LPGA should live up to its motto even more closely than it has in the past, if Schmidt has his way. Says he:

"Missouri LPGA has become one of the best associations in its field. However, we cannot thrive on past accomplishments only. All efforts must be amplified if we are to continue as a progressive and productive association. Through mutual cooperation, progress is unlimited."

J. A. Smith elected president by CNGA board of directors

Elected president for 1960-61 of the California Natural Gasoline Association was J. A. Smith, superintendent of gas and gasoline plants in the Los Angeles division of Texaco Inc.'s domestic producing department. The new vice president is R. O. Boykin, manager of gasoline plants and assistant to the vice president of production, Monterey Oil Co. The elections took place at the association's board of directors' meeting July 19.

VIKING LP-GAS PUMPS



All Viking series 200 LP-Gas pumps now give you full maximum pump capacity over a longer period of time than ever before.

With Viking's return-to-tank valve on pump head, and equipped with full size piping and excess flow check valve, these pumps operate cooler with less wear.

With Viking's new, exclusive automatic internal pressure lubrication feature, this bearing remains cooler, resulting in still longer pump life.

For full capacity and longer life, insist on Viking 200 series LP-Gas pumps for your next truck or bulk plant installation!

5 to 158 G.P.M. Sizes
For full information,
write now for bulletin HB

*Patent pending



Fig. 200 Pump
equipped with
return-to-tank
valve on head



Pictured above, Viking's new exclusive, automatic pressure lubrication system

VIKING PUMP COMPANY

Cedar Falls, Iowa, U.S.A.
In Canada, It's "ROTO-KING" Pumps
See Our Catalog Unit
In Butane Propane Catalog

LAST STILL LONGER

HOP-A-LONG HARPER—The Gold Star Ranger—SEZ:

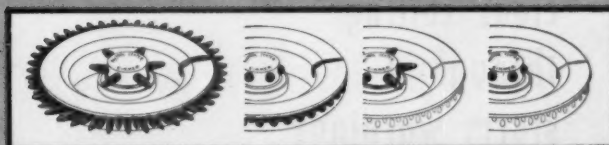
**Next to my six-shooter, the most
convincin' thing on the range is...**

ALLTROL®

CENTER SIMMER BURNERS



Send for **FREE**
CENTER SIMMER
Demonstration
Manual. Contains
five simple, sales-
closing demonstra-
tions.



"Be a smart Buckaroo! Draw a bead on those 'jist lookers' by showin' 'em how this star feature of your Gold Star ranges actually works. Yessiree, when you demonstrate its *measured heat settings* yore usin' a real double-barrel 'convincer,' because ALLTROL Center Simmer's 'clicks' are as famous as Billy the Kid's six-guns. No need to be a spell-binder. Jist show 'em ... and the sale's as good as in yore saddlebags."



ALLTROL CENTER SIMMER Burner meets the basic specifications for ACA "Gold Star Ranges."



HARPER-WYMAN COMPANY

Specialists In Burners and Controls for Domestic Gas Appliances

Dept. 90-B, 8550 Vincennes Ave., Chicago 20, Illinois

Associations

Newly elected to the board of directors for a two-year term were: E. H. Fisher, Pacific Gas & Electric Co.; John R. Fraser, Union Oil Co. of California; Warren F. Kane, Clark Brothers Co.; J. A. Millen, Southern Counties Gas Co.; L. S. Osborne, Union Pacific Railroad Co.; and L. L. Palmer, Chancellor-Western Oil & Development Co. E. R. Millett, Jr. was reappointed secretary-treasurer of the Association.

Kentucky LPGA board makes plans, changes

The Kentucky LPGA inaugurated plans for the 1960 "Search for Miss Future Home Economist" at the recent summer board session.

The winner will receive a month's experience as a paid home economist. She will begin with two weeks on-the-job training with a home economist in a gas and an L.P. gas company. She will continue demonstration work for LPG operators in Kentucky.

In a closed session the board of

directors also approved the re-districting of the association. Several counties were transferred from one district to another "to insure a fair and equal representation for all sections and members."

New England LPGA will hold safety sessions for two months

The New England LPGA is presenting safety sessions during September and October. A series of two meetings at each of 15 locations throughout the state is planned.

Local state regulations governing the LPG industry and NFPA Standards 54 and 58 will be discussed by industry leaders. The sessions are being put on by popular request, because, according to the state LPGA secretary, New England fire marshals are unhappy with the lack of attention by some dealers to regulations now in effect.

Each meeting will last about three hours, with no meals or entertainment. They will be so located that every dealer, his service and installation men can easily attend.

New York LPGA clambake held at Sackets Harbor

The New York State LPGA held its summer meeting and clambake Aug. 17 at Sackets Harbor, N. Y.

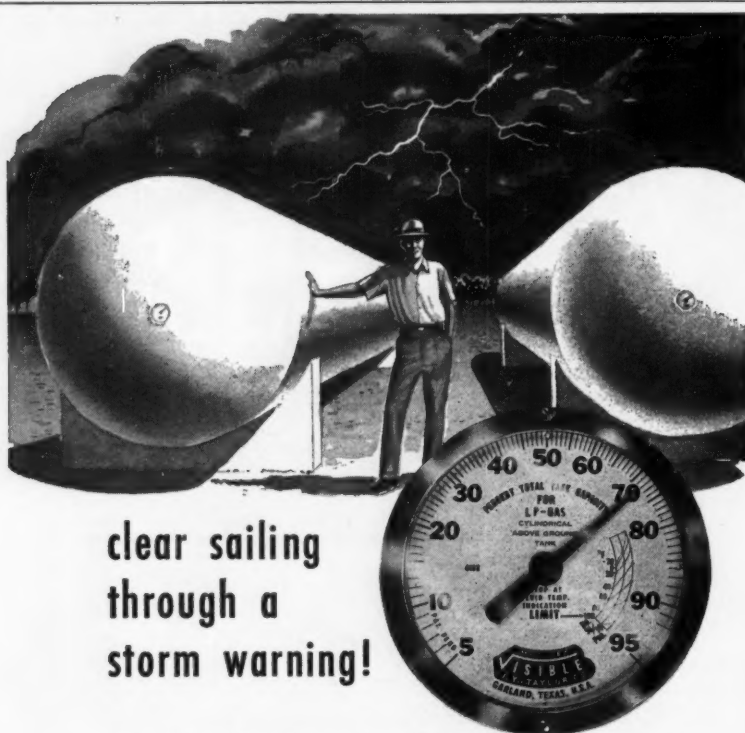
W. S. Brenkle, Natural L.P. Gas Corp., Waukesha, Wis., appeared on the program with a presentation on "L.P. Gas—Utility Cooperative Programs."

Big Payette Lake setting of Tri-State convention

Picturesque Big Payette Lake was the setting of the Tri-State Third annual convention and trade show held at the Shore Lodge, McCall, Idaho, Aug. 21-23.

The Idaho-Nevada-Utah-sponsored convention program included sessions on credit and collection problems, gas air conditioning, and a cooking demonstration by Roby Robison, Whirlpool Corp.

The trade show carried a unique touch, with oriental-designed booths set up on the front lawn facing the lake.



clear sailing
through a
storm warning!

When a predicted storm casts its ominous threat over the country-side, the LPG distributor is one person who knows he and his customers will have smooth sailing through the worst weather.

Because one glance at his Visible Master gauge assures him that sufficient fuel levels are on hand to supply all his customers' needs. Their well-being in any kind of weather is mirrored in its dependable face.

This man and the hundreds of homemakers, farmers, truckers and all others who depend on him know they can place their trust in Visible, because Visible means years of accurate, dependable performance . . . performance that has made the Taylor Visible gauge the largest selling LPG and NH₃ float gauge in the world . . . the "Standard of the Industry."



1213 SOUTH AKARD • DALLAS

ASSOCIATION NOTES

Marketers, producers, manufacturers and association members were invited to an industry meeting spon-

Every fifth trip is free with tankers made of USS "T-1" Steel

"I'm the best salesman 'T-1' Steel ever had. No other material could do the job so effectively and inexpensively. Switching to tankers built of USS 'T-1' Steel lowered our transportation cost 20%, increased the payload and lowered maintenance cost," says Mr. C. Hillyard Muncy, Assistant to the Vice President in charge of transportation for Anchor Petroleum Company of Tulsa, Okla.

"Ours is one of the nation's largest independent operations. In addition to producing and marketing our own oil, Anchor sells LPG and natural gasoline, fuel oil and asphalt. We maintain our own underground storage plants and transportation facilities," reports Mr. Muncy, "including seven trucking terminals and a fleet of 35 tankers."

"Before the purchase of our first Beaird Payliner in 1958, we leased all our transports. Today we have twenty-nine transports, all made of 'T-1' Steel. These new units," explains Mr. Muncy, "increase the payload 1700 gallons for each truck. In a year this adds up to 8,250,000 gallons extra payload. We would need forty-one of the old units to do the same job. You can be sure any transports we buy in the future will be 'T-1' Steel units."

The lighter weight and increased capacity of "T-1" Steel tankers permitted Anchor to streamline their transportation operation, reduce rolling stock and keep maintenance to a minimum. USS "T-1" Steel is furnished with a minimum tensile strength of 115,000 psi. This tough, weldable steel permits designing to higher allowable working stresses which results in increased payload. Write for the complete story on USS "T-1" Steel: United States Steel, 525 William Penn Place, Pittsburgh 30, Pa.

USS and "T-1" are registered trademarks



These 8,400-gallon tankers built of USS "T-1" Steel haul 27% more payload than heavier conventional units. They were built by J. B. Beaird Company, Shreveport, La.



This mark tells you a product
is made of modern, dependable Steel.

United States Steel Corporation—Pittsburgh
Columbia-Geneva Steel—San Francisco
National Tube—Pittsburgh
Tennessee Coal & Iron—Fairfield, Alabama
United States Steel Supply—Steel Service Centers
United States Steel Export Company
United States Steel



Association Notes

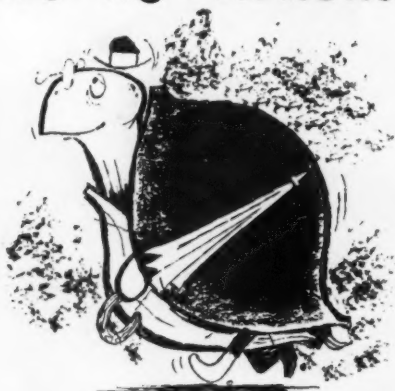
sored by the West Virginia LPGA July 31 in Summersville. Al Stevens, Summersville Maytag Co., arranged facilities for the meeting. Briefly, the program included an L.P. gas fire control demonstration with fire-fighting personnel and the state fire marshal attending. A general meeting was held to discuss current problems, activities and future projects.

"S.B.A. and the Role it Plays in Today's Economy" was the title of a presentation by H. R. Smethills,

Small Business Administration, Denver, at the recent Montana-Wyoming annual meeting, held at the Wort Hotel, Jackson, Wyo. LPGA President Rudy J. Munzer addressed the meeting with "Let's Look at Our Industry."

The annual convention of the Colorado LPGA was held at the Harvest House, Boulder, July 17-18. Lee A. Brand, Empire Stove Co., Belleville, Ill., spoke on "Gas vs Electricity." R. H. Mahnke of the Chicago LPGA addressed the group with "Looking Ahead With LPGA."

WITH BEACON YOU GET Built-in Protection



and here's why

Dwindling supplies, late deliveries, repeated calls or telegrams... a contract with BEACON protects you from these and other headaches no matter what the reason or the circumstances of delivery.

Call, write or wire Beacon Petroleum Company for further information.



CALENDAR

All associations
are invited to send
in the dates of their
forthcoming meetings

- September 11-13**—Florida LPGA Annual Convention — Hotel Robert Meyer, Jacksonville, Fla.
- September 12-13**—North Carolina LPGA Annual Meeting—Sir Walter Hotel, Raleigh, N. C.
- September 13**—Pennsylvania LPGA Annual Convention — Holiday Motor Hotel, Mechanicsburg, Pa.
- September 15**—NGAA Rocky Mountain Regional Meeting—The Palliser Hotel, Calgary, Alberta.
- September 16-17**—Wisconsin LPGA Fall Convention, Maxwellton Braes Country Resort, Bailey's Harbor, Wis.
- September 18-19**—Virginia LPGA Annual Convention — John Marshall Hotel, Richmond, Va.
- September 23-24**—Iowa LPGA Convention—The New Inn, Lake Okoboji, Iowa.
- September 29-30**—LPGA International Board Meeting—Queen Elizabeth Hotel, Montreal, Quebec.
- October 10-12**—American Gas Association Annual Convention — Atlantic City, N. J.
- October 11-12**—Northeast LPGA Convention—Ambassador Hotel, Atlantic City, N. J.
- October 11-15**—North Carolina State Fair—Raleigh, N. C.
- October 17-21**—48th Annual National Safety Congress. Sessions on Industrial safety scheduled for the Conrad-Hilton Pick-Congress, Sheraton Towers, Morrison and LaSalle Hotels; traffic safety, Pick-Congress; commercial vehicle and transit safety, La Salle; farm safety, Palmer House; and school and college safety, Hamilton, Chicago, Ill.
- October 28**—NGAA Southern Regional Meeting—The Carlton Hotel, Tyler, Texas.
- November 18**—NGAA Panhandle-Plains Regional Meeting—The Herring Hotel, Amarillo, Texas.
- December 5-9**—AGA Gas Air Conditioning Sales School—Nationwide Inn, Columbus, Ohio.

1961

- January 20** — NGAA Gulf Coast Regional Meeting—The Robert Driscoll Hotel, Corpus Christi, Texas.
- February 13-16**—American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc. — Semi Annual Meeting and Exposition, Chicago, Ill.
- February 22-24**—Eastern Canada LPGA Trade Show and Convention, Queen Elizabeth Hotel, Montreal, Quebec.
- March 15-17**—NGAA 40th Annual Convention—The Baker Hotel, Dallas, Texas.
- April 13-15**—Western Liquid Gas Association Convention and Trade Show —Hotel El Dorado, Sacramento, Cal.

BUTANE-PROPANE News

How LPG engines win the economy run against gasoline and diesels

This documented evidence of LPG's superior economy has been presented to the Society of Automotive Engineers and printed as a paper. It should prove a powerful sales tool for you.

E. A. V. Horiak • Director of Engineering, Hercules Motors Corp.

A BPN Exclusive

TODAY'S ENGINEERING is tightly connected to cost analysis. We have to continuously study costs to turn out products that will remain competitive. Every effort has to be exerted to produce machinery that will discharge its task with minimum expense, for it's the overall efficiency that counts.

We all know we can produce spark ignition engines for less money than the most ingenious diesel engine of comparable power. However, the cost of gasoline for the spark ignition engine will be higher than the cost of diesel oil when both engines do the same job. Thus, when the prospective operator figures initial cost plus fuel cost, he should be able to determine which engine offers greater overall economy.

Purchase price and fuel cost, however, are only part of the picture. Amortization and interest on capital investment must be figured. There are also quite a number of engineering angles, some of which are very difficult to translate into dollars and cents. We therefore limited our study to five cost factors which can be readily expressed in dollar values: amortization, fuel,

lube oil, service, and weight penalty costs. We fully realize that some of these values vary with different makes of engines and different operations, but have compiled costs for typical engines. All figures were projected on both a 30,000-mile-per-year basis and a 100,000-mile-per-year basis.

Here is how we figured the cost items for typical gasoline, diesel, and LPG engines:

Amortization is, of course, the yearly write-off of a portion of the purchase price and of the interest on the capital investment. Interest was figured at six per cent. The amortization periods were different for each type of engine because we believe they should be equal to the engine life before major overhaul.

Thus, the gasoline engine, estimated to be good for 60,000 miles before major overhaul, has a two-year amortization period when used on a 30,000-mile-per-year basis. On the 100,000-mile-per-year basis, however, the engine would last only 7.2 months before a major overhaul. For the best example, we chose a typical, low-cost, high-production, basically passenger car engine of 200 to 240 hp. Estimated cost is \$1000.

The diesel engine selected is the heavy duty type that predominates in today's diesel fleets. While this engine costs \$2500, 2½ times as much as the gasoline engine, its life before major overhaul is 150,000 miles, 2½ times that of the gasoline engine.

The LPG engine is a Hall-Scott series Hercules heavy duty truck engine of similar power. Its price, \$2000, falls between that of the other two units, but its expected life before major overhaul, 300,000 miles, is twice that of the diesel engine and five times that of the gasoline engine.

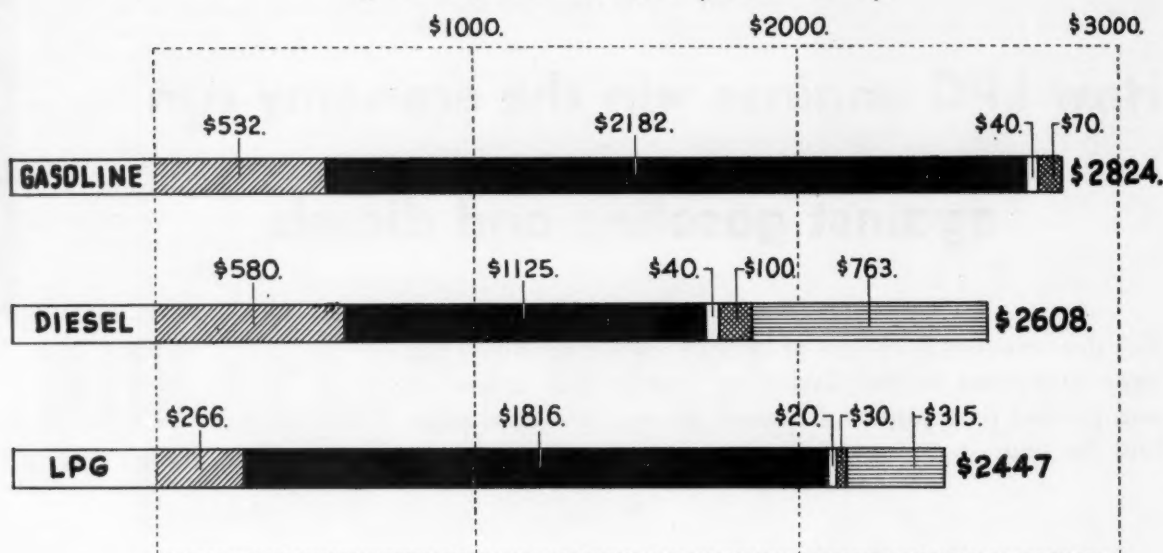
Fuel costs were figured on this basis: gasoline engine, 2.2 mpg, 16 cents per gal.; diesel engine, 4 mpg, 15 cents per gal.; and LPG engine, 1.9 mpg, 11.5 cents per gal.

The 0.3 mpg (15 per cent) difference between LPG and gasoline was obtained by studying overall operating figures of large fleet operators. Gasoline always makes a 10 to 15 per cent better showing than LPG. The 1.8 mpg difference between diesel and gasoline trucks has been proved over many years of diesel conversion. According to specific conditions, the figure actually varies from 1.6 to 2.0 mpg.

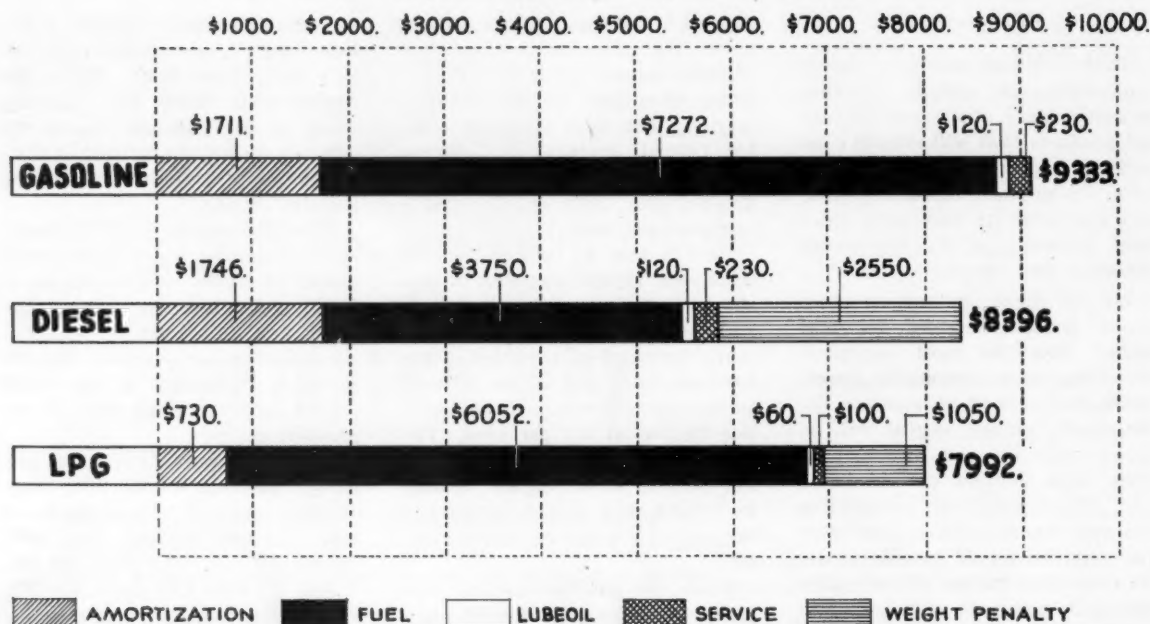
These figures would lead one to

COMPARATIVE OPERATING COSTS

(On 30,000 mile per year basis)



(On 100,000 mile per year basis)



believe that an LPG engine operates with lower efficiency than the other two types. However, the heat content of any fuel is a function of weight, not volume. The weight of one gal. of LPG is about 4.4 lb, as compared to 6.2 lb for gasoline and 7.2 lb for diesel oil.

Thus, on a pound basis, the cost

of fuel for the three engines looks like this: gasoline engine, 0.352 miles per lb of 20,700-Btu fuel costing 2.6 cents per lb; diesel engine, 0.550 miles per lb of 22,000-Btu fuel costing 2.1 cents per lb; and LPG engine, 0.433 miles per lb of 21,500-Btu fuel costing 2.6 cents per lb.

While the costs of LPG and gasoline are about the same, LPG works out about two per cent lower in cost per Btu. However, the thermal efficiency of the LPG engine is actually about 18 per cent higher, due to its higher octane rating. Cleaner-burning LPG keeps engines in better operating condition,



Ford Tractors in two power sizes are available with Zenith LP-gas carburetor systems. LP-gas conversion units are offered for 600, 700, 800 or 900 series Ford Tractors.

FORD TRACTORS PROVE THESE ADVANTAGES OF ZENITH LP-GAS SYSTEMS

Zenith* carburetion systems for LP-gas give tractor dealers new and appealing sales advantages. Think how many of your customers will be interested when you demonstrate features like these—

1. Substantial savings in fuel costs
2. Quieter, smoother operation
3. Fewer overhauls
4. Fewer tuneups
5. Cleaner spark plugs
6. Longer oil life
7. Minimum dilution of crankcase oil
8. Underwriters' Laboratories approved
9. Clean, odorless exhaust

Zenith is not only the oldest but also one of the most experienced manufacturers of carburetors for farm tractors. This experience is applied to its LP-gas systems to assure your customers of *all* the advantages of LP-gas fuel at low cost.

Also it is easy as well as profitable to enjoy LP-gas advantages with Zenith LP-gas conversion units—available for conversion of all makes of gasoline tractors.

For complete details on how you can share in this rapidly expanding market, write to: LP-Gas Sales Department, Zenith Carburetor Division, 696 Hart Avenue, Detroit 14, Michigan.

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Zenith Carburetor Division



LOUISVILLE CONCRETE SERVICE, INC.

"REDUCE MOTOR MAINTENANCE 50%"



... WITH

CENTURY


L-P GAS CARBURETION

Mr. S. D. Zenor, General Manager, Louisville Concrete Service, Inc., Louisville, Kentucky, reports... "our service includes seven Crane Carrier Corporation Mixer Master trucks. Six of these are equipped with Century LP-Gas Carburetion Systems. Upon careful comparison with identical gasoline operated trucks, we have recorded an average of 50% **LESS** motor maintenance and tune-up. Savings have also been recorded due to less frequent oil changes. In addition, we no longer suffer loss due to pilferage. The LP-Gas sealed tank system prevents syphoning or other means of looting which occur on gasoline trucks when parked. In addition our drivers report...

... Instant Power on Take-off
... No Power Lag"


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The Safe Hose Nozzle

Available with Fixed Acme or P. O. L. Adaptors

For information ask

PARKHILL-WADE

475 Huntington Drive, San Marino, Calif.

LPG economy run

also influencing consumption figures.

Lube oil consumption is a highly controversial subject with opinions varying widely on what constitutes desirable consumption. It is generally accepted that lube oil in LPG engines does not suffer from dilution, as it does in gasoline engines, or from "carboning up," as it does in diesel engines.

Our figures are based on lube oil consumption of 300 mpg for gasoline and diesel engines and 600 mpg for LPG engines. Fleet records substantiate these figures.

Service costs are difficult to evaluate justly for three different types of engines. However, we can generalize in two directions.

Close scrutiny (at the Timken Roller Bearing plant) of repair costs for different types of internal combustion engines indicated that each engine has a given life expectancy before major repairs are necessary. Repair bills after this period are just about equal to amortization costs. Therefore, increased repair bills after the initial-life period will not affect total costs, since there is only one amortization period.

While we thus do not have to include major repair charges, we do have to allow for such tune-up costs as cleaning and replacing spark plugs, injection nozzles, and filters. Gasoline-operated trucks, on the average, use new spark plugs every 3000 miles and new filter elements every 1500 miles. LPG-using trucks get approximately 10 times the service from these components, at least 30,000 miles on plugs and at least 10,000 miles on filters. Diesel engines, of course, have no plugs, but they do require new injection nozzles and they are harder on filters, which usually have to be larger and more expensive.

Weight is an important factor in evaluating the merits of different power plants for highway use.

Many trucks are loaded to the maximum gross weight permitted by authorities. In such cases, the extra weight of a heavy power plant reduces the payload. Long-distance truck lines find that a 1000-lb payload loss costs them approximately 1.5 cents per mile.

The passenger car-type engine used in the gasoline powered truck weighs about 800 lb. The heavy duty, truck-type LPG engine, including LPG-handling equipment, will weigh about 700 lb more, or a total of 1500 lb. The type of diesel engine now popular weighs 1000 lb more than the LPG unit, or a total of 2500 lb. It should be noted that the great weight disparity is between the LPG and the diesel engines, since both are heavy duty, while the heavy duty LPG engine does not fare too badly when compared with the lighter duty gasoline engine.

Three other factors were not included, since they are harder to reduce to a dollars-and-cents basis.

Weight increase was figured only for the power plant, and not for the power train and chassis, which would probably be heavier for the heavier engines. This would immediately increase the weight penalty for the heavy engines, particularly the diesel.

Again, weight costs money when the original purchase is made, and this affects the amortization factor. This would be especially true

where a heavy, slower-speed diesel might require special transmissions, axles, and chassis.

The third factor not included is definitely favorable to the LPG engine. In this cost comparison, we assume that trucks or buses with different powerplants operate on the same schedule and we do not list varying cost-of-operator figures. However, we have observed in many instances that a more powerful Hall-Scott LPG engine can be installed in a space that would accommodate only a less powerful diesel engine. The more powerful LPG engine would also weigh less than the less powerful diesel. The extra power and reduced weight can cut travel time and thus reduce operating costs.

Totaling up the factors, the LPG-engined truck is the victor on both the 30,000-mile-per-year basis and the 100,000-mile-per-year basis, as shown in the accompanying charts.

Traveling 30,000 miles per year, the LPG-engined truck should cost \$2447 to operate, including amortization, fuel, lube oil, service, and weight penalty. The diesel truck is 6.6 per cent, or \$161 more expensive, with the five costs totaling \$2608. The gasoline-fueled truck has no weight penalty, since it is the lightest of the three, but it is still 15.4 per cent more expensive than the LPG truck. The \$377 difference between the two gives the gasoline truck a total operating figure of \$2824.

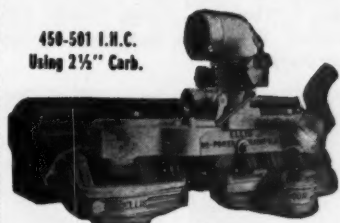
When the three trucks travel 100,000 miles per year, the figures improve slightly for the diesel, but worsen for the gasoline engine. The LPG truck totals out at \$7992. The diesel is 5.1 per cent or \$404 more, adding up to \$8396. The gasoline truck, however, will cost \$9333 to operate. That's \$1341 or 16.8 per cent more than the LPG truck!

In both cases, the LPG truck wins because it has a smaller weight penalty than the diesel. If the weight penalty were excluded, the diesel would win, but the figures would not be as realistic for a typical example.

For the individual case, it is necessary to seriously study existing conditions, since the results might differ substantially. Our figures show that LPG merits consideration and in many operations will prove the most economical fuel. ■

DON'T RAISE THAT COMPRESSION! . . . install an ELLIS (extra cold) MANIFOLD

450-501 I.H.C.
Using 2 1/4" Carb.



Leading LPG engineers are sold on the merits of Ellis Bu-Power (Extra Cold) Manifolds. These manifolds give high-compression performance with low-compression reliability. Head gasket, ring and bearing troubles are minimized.

Get the most out of your LP truck with an Ellis Dual Exhaust Manifold. This latest addition to the Ellis line has proven far superior to the so-called improved 3 1/2 x 4" exhaust systems in test after test under actual road conditions.

By lowering combustion chamber temperatures and reducing back pressure, Ellis Dual Exhaust increases horsepower. Used with the Bu-Power Manifold, it gives your truck power that equals gasoline horsepower. This is possible only with an Ellis Manifold.

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for long wear
low vibration
fast pick-up

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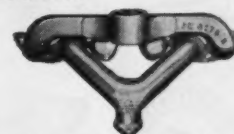
JOHN DEERE
Vanasil or
Aluminum
Pistons—jump
power output
as much as
25%



MINNEAPOLIS-
MOLINE
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weight, yet tough
as cast iron

LP conversions of John Deere and MM-"U" tractors result in more power and performance with Johnson Vanasil Pistons. Newly patented Vanasil amazingly combines the hardness of cast iron with the lightness of aluminum. Precision Johnson machining and engine "know-how" keeps pistons snug without sticking. Tractor vibration is kept low . . . stalling eliminated . . . pick-up increased.

For John Deere A, G, "50", "60" and "70" . . . also Minneapolis-Moline "U". Johnson Aluminum Pistons are available for John Deere A, B, D, G and H models



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Ford 600, 700, 800, 900 Series
—also International and Chevrolet trucks.

WRITE for literature and prices.

JOHNSON MACHINE SHOP

DEPT. B-35

PONTIAC, ILL.



PEOPLE

RONALD M. ROBERTS—from division measurement engineer for Houston-Texas Gas & Oil Corp. to sales representative for American Meter Co. in the Atlanta district. EDMUND B. LENNIG has been appointed sales representative in the San Francisco district.



R. M. Roberts
American Meter Co.



D. R. Schoeneman
Tuloma Gas

DON R. SCHOENEMAN—from district sales representative in Des Moines to head of the newly opened Midwest regional sales office of Tu-

loma Gas Products Co. C. R. ENGLERT, formerly district representative in the now-closed Grand Island office, has been transferred to the Casper, Wyo. office.

CHESTER F. WORTHINGTON—from gas refrigerator sales manager to east-central regional sales manager for RCA Whirlpool Corp., St. Joseph, Mich. H. THOMAS STROOP, formerly sales manager of gas refrigerators, replaces Worthington. STEPHEN E. UPTON, advertising and promotion manager of the utility division, succeeds Stroop. W. KLEE GRUMBINE—from assistant sales training manager to manager of sales training, appliances. WILLIAM C. HUME—from corporate manager of quality controls to refrigerator and freezer product manager, succeeding Evans T. Morton, who has resigned.

IRVING NELSON—from field service engineer to assistant sales manager for the appliance division of the

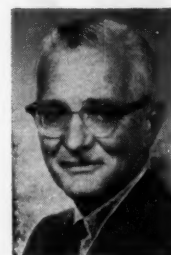
Blackstone Corp., Jamestown, N. Y. GEORGE D. GOULD—from director of advertising and sales promotion for National U. S. Radiator Corp., Johnstown, Pa., to advertising and sales promotion manager of Blackstone.

LAURENCE C. JOHNSON, formerly sales representative for Crookes-Barnes Laboratory Inc., is now sales representative for Caloric Appliance Corp. in the Chicago area. Other Caloric promotions are: MANUEL G. RICE, formerly sales manager of Dimensional Kitchens, to Caloric sales representative in Cleveland. WILLIAM B. THOMAS is now in the newly created position of director of service. LEROY F. BROWN replaces Thomas as service manager. HAROLD DOMENICO fills Brown's previous position of product control manager.

S. S. "PETE" PARKER has moved to California as president and general manager of National Sales Co., a wholly-owned subsidiary of National Tank Co., Tulsa. He will continue as director and vice president of National Tank and will reside in San Francisco.

HARRY L. BADGEROW has been named manager of L. P. gas sales for Cities Service Oil Co.'s marketing division, Chicago. He has served as sales representative and sales manager of L. P. gas in several regions for Cities Service.

WALLACE G. GINDER—from controller to vice president of Petrolane Gas Service Inc., Long Beach, Cal. ROBERT V. WILLS has been elected secretary.



W. Ginder



R. V. Wills

Petrolane Gas Service Inc.

SPENCER H. LANDES will manage Delta Tank's Dryex division in Houston. JAMES I. MONTGOMERY will serve as assistant manager.

OSCAR J. LEINS—from vice president and general manager to chairman of the board of Baso Inc., Milwaukee. J. H. THORNBERRY—from vice president to executive vice president.

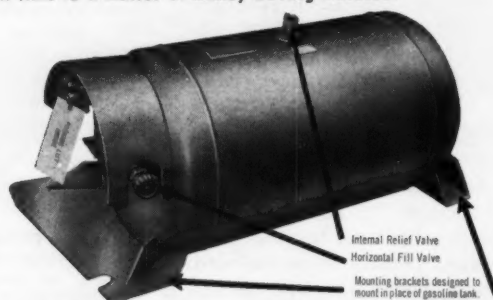


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The brackets have been designed to fit existing gasoline tank brackets —
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SAMUEL D. HOUSTON—from sales representative for the Grayson Div. of Robertshaw-Fulton Controls Co. to district sales manager (in Chattanooga, Tenn.) for Grayson Div.'s southern territory. FLOYD FOSTER, formerly field service engineer in Robertshaw-Fulton's national service organization, replaces Houston. RICHARD D. HALL has been named to the newly created position of manager, distributor sales, for the Grayson Div. in Long Beach.



F. Foster



S. D. Houston

Robertshaw-Fulton Controls Co.

ROBERT E. BARNES has retired from his post as vice president of American Liquid Gas Corp., Los Angeles. He will continue in a consulting and advisory capacity for Algas.

DON McNABY, formerly manager of dealer development, Suburban Gas Service, Pomona, Cal., has purchased Manas Gas Service of Woodland, Cal. JOHN SELIM—from chief engineer of Protane Corp., Cleveland, to division manager at Suburban. ED DOVENBERG, formerly Suburban division manager, has moved to Minneapolis where he will be affiliated with United Petroleum Gas Co.

L. H. WRIGHT, formerly assistant sales manager at Phillips Petroleum Co., is now in charge of administrative supervision of LPG and fertilizer sales. W. F. De Voe continues as manager of LPG sales.



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NOZZLE BURNERS for all capacities up to 1 1/4 million BTU's.

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Fine Products for Over 50 Years
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People

MARTIN SUDER—from field service representative to field service manager for Norge Div. of Borg-Warner Corp., Chicago. MISS KATHLEEN BRICK was recently appointed regional home service director of 10 western states for Norge.

LAWRENCE H. STANLEY, formerly an industrial marketing consultant, has been appointed to the newly created position of manager of marketing services for ACF Industries Inc.

ROBERT L. CHIDDISTER—from territorial supervisor of sales for Nibco to sales representative in the Chicago area for Wolverine Tube.

ALAN GOLDSTEIN—from sales administrator to assistant sales manager of the Garland commercial range division of Welbilt Corp., Mass., N. Y.

KENNETH F. ANGELO, formerly account executive at Minneapolis Honeywell is the new assistant national sales manager for Hydrotherm Inc., Northvale, N. J.

EARL A. MATHENY has been elected treasurer of Mid-America Pipeline Co., Tulsa.

WILLIAM W. CHATFIELD—from engineer of gas heating to chief engineer at Armstrong Products Corp., Huntington, W. Va.

T. G. HEARN—from general manager of the industrial division of Cleveland Pneumatic Industries to president and director of the Maytag Chicago Co.

FRED C. MCDANIEL, formerly with Communications Engineering Co., has joined Decibel Products Inc., Dallas, manufacturer of antennas, transmission lines and accessories for mobile radio.

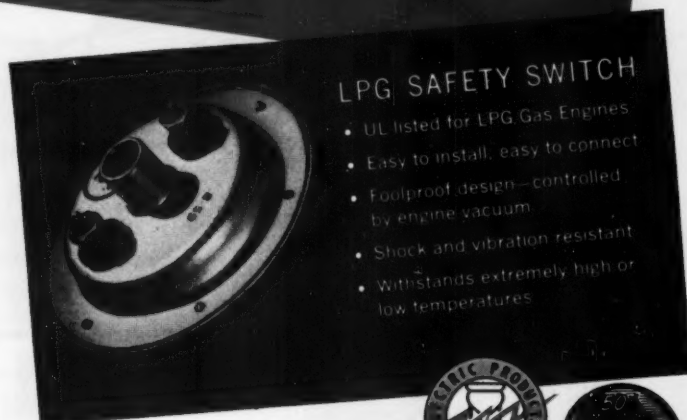
HUGH RUSSELL—from divisional controller and office manager to assistant treasurer of the Iron Fireman Manufacturing Co., Portland.

H. C. TEASDEL has been elected a vice president and director and GLENN M. FORGAN, a director of General Gas Corp., Baton Rouge, La.

DAN B. POMEROY has been appointed sales representative for the brass products division of Kerotest Manufacturing Co., Chicago.

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FOR ORIGINAL EQUIPMENT AND REPLACEMENT USE



McQUAY-NORRIS MANUFACTURING CO.

ELECTRIC PRODUCTS DIVISION, ST. LOUIS 10, MO.

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DEATHS

HARRY KAYE, 44, regional manager in Missouri-Kansas-Kentucky-Tennessee area for the Rego division of The Bastian-Blessing Co., died suddenly June 14 of a heart attack.



H. Kaye

The Bastian-Blessing Co.

THOMAS B. CRUTCHER JR., president of Crutcher Sales Co., Louisville, died June 11 at the age of 56 from a heart attack. Mr. Crutcher was a pioneer among LPG distributors and a member of the Kentucky LPGA, serving as a director and chairman of many of its committees.

BUTANE-PROPANE News


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Glass-Lined tanks



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Look at the complete line of **Brentwood** Water Heaters offered in a wide range of sizes and styles to meet every hot water need. **Brentwood's** new manufacturing facilities permit in-plant production of water heater tanks, including Glass-Lining, Galvanizing or Stone Lining. More than 60 years of **Brentwood** experience and research in water

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Name

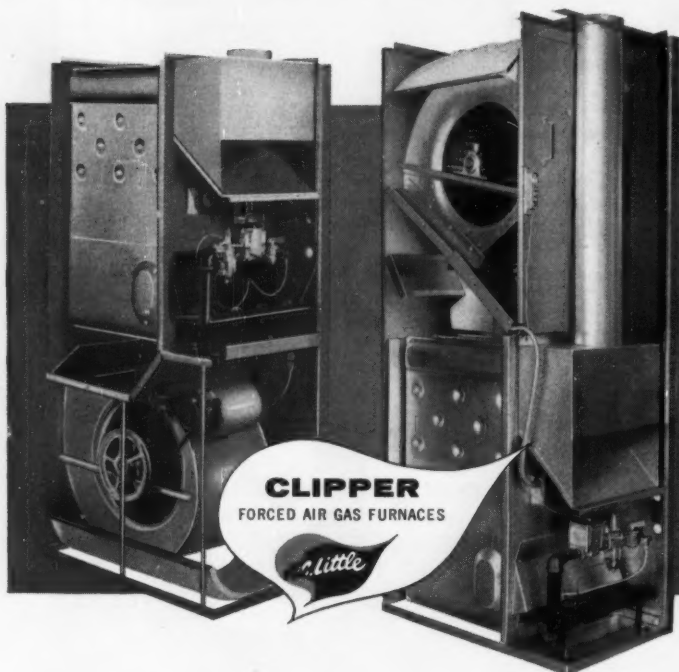
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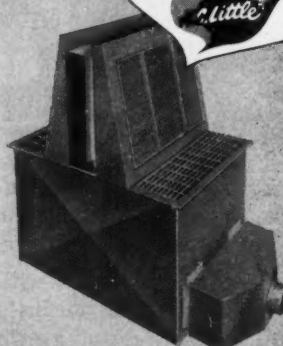


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FORCED AIR GAS FURNACES

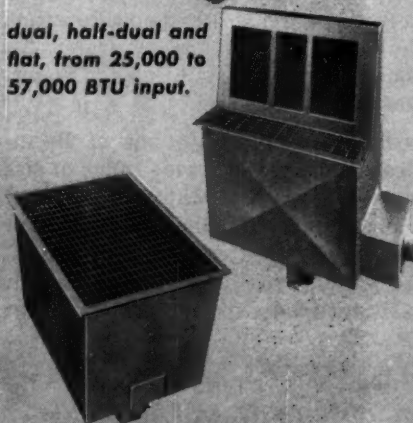


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dual, half-dual and
flat, from 25,000 to
57,000 BTU input.



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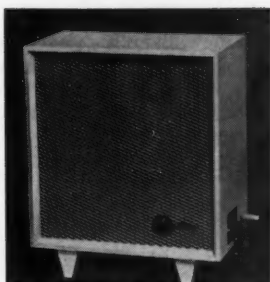
We're profit-minded. We'll listen. Send particulars.

NAME _____

ADDRESS _____

For further information on any items in this section use the convenient Univac Readers' Service postcards on pages 81, 82.

New Products and Free Literature



**8000 Btu heater
fully vented**

Circle 1 on Readers' Service Card

Designed for small rooms, truck cabs, mobile homes and boats, this 8000 Btu circulating heater (GEC 420) is fully vented. Sturdy assembly of heavy gauge metal, drilled port burners and expanded metal fronts provide enduring beauty and long service life. Armstrong Products Corp.



**Heating, cooking unit
weighs only 14 lb**

Circle 3 on Readers' Service Card

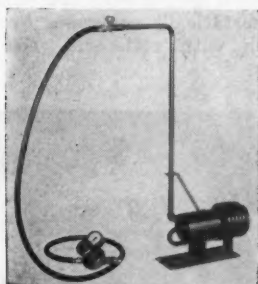
Sportsmen, ice fishermen, campers and construction workers can use this combination heating, cooking unit. It has an input of 20,000 Btu. The unit (GEC 240) weighs only 14 lb and measures 19 in. high and 10 in. in diameter. It has two sturdy carrying handles. Ohio Foundry & Manufacturing Co.



**Kitchen color styling
offered with range**

Circle 5 on Readers' Service Card

New gas ranges (GEC 240), available in 20, 30, and 36 in. models, feature "keep warm" oven system, chrome-plated burners, and dramatic background. The "four" series includes models that have received the AGA Gold Star. A free kitchen color-styling service comes with each. Caloric Appliance.



**Burner operates on
liquid withdrawal**

Circle 2 on Readers' Service Card

This portable asphalt and tar kettle burner (GEC400) operates on liquid withdrawal from cylinders. Will fit most equipment. Wide-angle flame washes flue walls, providing faster heat with less gas consumption. Burners are equipped with a three port orifice. Flamegas.



**LPG vaporizer fits
hose of any engine**

Circle 4 on Readers' Service Card

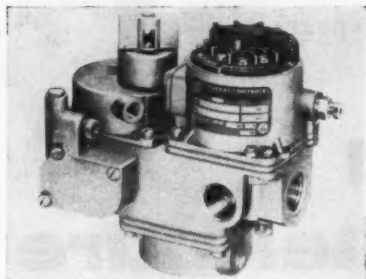
For the top or bottom radiator hose of any engine, this LPG vaporizer (GEC 830) fits hoses of 1½ in., 1¾ in., and 2¼ in. ID. Three fuel outlets are provided 90 deg. apart. The unit weighs 2¼ lb, and is UL approved. Zenith Carburetor Div. of Bendix Corporation.



**Float gauge transmits
tank reading to driver**

Circle 6 on Readers' Service Card

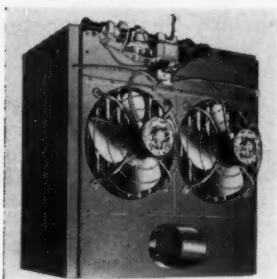
One function of this remote indicating float gauge is to show the operator a liquid level reading, while he fills the tank. The other is to transmit a reading to the instrument panel. It (GEC 540) may be placed with gas pressure in the tank. Rochester Gauges.



Combination valves install easily

Circle 7 on Readers' Service Card

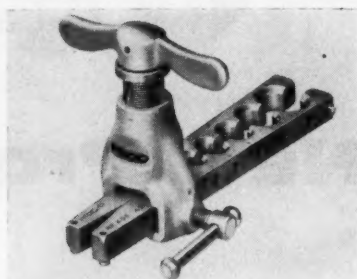
"Versatrol" combination valves (GEC-820) have interchangeable parts, manual reset, 100 per cent safety shutoff, are easy to install. Applications to 180,000 Btu. General Controls.



Fan, motor support quiets propeller unit heaters

Circle 10 on Readers' Service Card

Suspended gas-fired unit heaters (GEC 410) range from 175,000 Btu to 300,000 Btu. Propeller fan models are quiet because of rigid fan and motor support. Dover Corporation.



Flaring tool parts locked together

Circle 13 on Readers' Service Card

These new flaring tools produce 45 deg. or 37 deg. flares easily on copper, aluminum and brass tubing. Working parts lock together to prevent loss. Ridge Tool Co. (GEC 770).



Gaslite distinguished by hurricane chimney

Circle 8 on Readers' Service Card

The Homesteader gaslite (GEC 470) features a tilt-top for easy access, hurricane chimney, long-life suspension mantle, and insect-proof screened air intake. Arkla Air Cond.



Multivalve units permit on-the-site filling

Circle 11 on Readers' Service Card

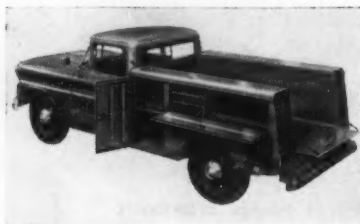
Multivalve units (GEC 820) permit on-the-site filling of 100-lb cylinders; are more compact (4 15/16 in. high); eliminate costly cylinder pickup and delivery. Bastian-Blessing.



Eye-level oven offers ease in baking

Circle 14 on Readers' Service Card

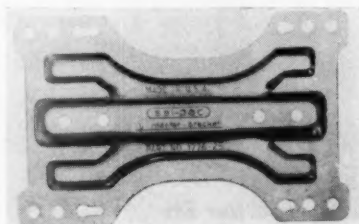
The "Futura," a 40-in. gas built-in (GEC 240), features a convenience-level baking oven and separate thermostatically controlled broiling section with rotisserie. Geo. D. Roper.



New service body designed for old or new chassis

Circle 9 on Readers' Service Card

The new service-Master body (GEC 790) is available for old or new 1/2, 3/4, 1 and 1 1/2 ton chassis, regardless of make. Op-Steel canopy for cargo space optional. McCabe Powers.



Regulator mounting bracket offers six positions

Circle 12 on Readers' Service Card

For LPG regulators with standard mounting centers, the "master bracket" (GEC 700) offers six positions. Slide-on feature speeds mounting and removing. Selwyn-Pacific Co.



Pressure regulators handle broad range of pressures

Circle 15 on Readers' Service Card

Pressure regulators (GEC 700), in sizes from 1/4 in. through 1/2 in., can be used for inlet pressures up to 10,000 psi and adjustable controlled pressures to 6000 psi. Grove Valve.

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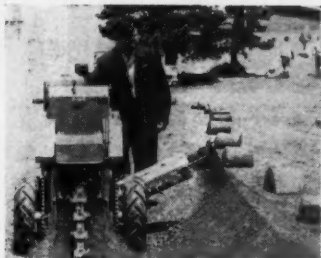
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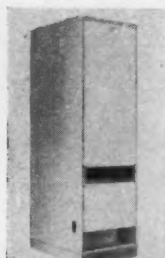
New products and free literature



Trencher digs 4 ft deep and 12 in. wide

Circle 16 on Readers' Service Card

A new self-propelled trencher (GEC 210) weighing 1460 lb, digs depths of 2½, 4½, and 5½ ft and widths of 4, 6, 8, 10, and 12 in. The heavy-duty conveyor deposits dirt on either side of the trench and can be installed within 60 sec. A control handle operates its hydraulic power boom lift. Arps Corp.



Warm air furnace adapts to air conditioning

Circle 19 on Readers' Service Card

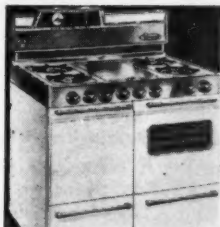
Designed for alcove and closet installations, this new warm air furnace (GEC 420) measures 18 in. wide and is produced in up- or downflow style. It features a full-capacity belt-driven blower with a ¼ hp motor suitable for air conditioning adaptation. Insulated with spun glass. Majestic Co.



Engines available with LPG fuel system

Circle 22 on Readers' Service Card

LPG fuel systems are available on two new trucks (GEC 100). One is rated at 49,000 lb gvwt, the other, 39,000. Featured is International's bogie with air-operated power divider differential lock. Both have 6-cylinder engines rated at 182 hp. International Harvester Co.



Broiler unit removable for ease in cleaning

Circle 17 on Readers' Service Card

The entire Glide-a-Matic broiler unit on this 36-in. Gold Star range (GEC 240) can be removed for washing. Accurate low oven temperatures between 140 and 250 deg. are maintained with the Red Wheel Lo-Temp control. Magic Chef.



Two-way radio speaker gives higher sound level

Circle 20 on Readers' Service Card

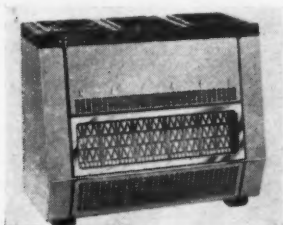
A new 10-watt speaker for two-way radio uses 90 per cent less battery power than 5-watt units. The speaker (GEC 140) weighs 3 lb 8 oz and can be hung on the car's window so messages may be heard outside. General Electric.



Slim heater reduces cost of installation 90 per cent

Circle 23 on Readers' Service Card

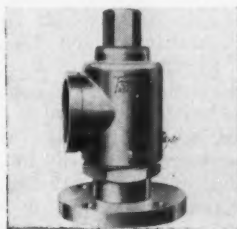
Slim and finished in two-tone decorator colors, this new heater (GEC 420) lowers installation costs 90 per cent. Factory assembled vent is inserted through-the-wall, eliminating chimneys and ductwork. H. C. Little Burner Co.



Light colors highlight popular-size gas heaters

Circle 18 on Readers' Service Card

On these gas heaters (GEC 420) front and side panels are light beige and top grille and panel edges are light brown. They are available in 30M Btu, 50M Btu, and 65M Btu. Finished in dark brown porcelain enamel. Locke Stove.



Valve gives precise blowdown control

Circle 21 on Readers' Service Card

Where maximum pressure is 300 psi, this new safety relief valve (GEC 820) provides precise blowdown ring control for gases, vapors and liquids. Made of stainless steel, the one-piece valve eliminates waste and corrosion. Farris Eng.



Multi-purpose heating unit burns either fuel oil or gas

Circle 24 on Readers' Service Card

A new dual-fuel unit (GEC 420) designed as a central furnace, unit heater, or duct furnace can be installed for up, down, or horizontal flow. Industrial air conditioning can be added. Either No. 2 fuel oil or gas is burned. Lennox Ind.



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*America's most beautiful,
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thru-the-wall gas heater*

Here's why:



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OUT FRONT CONTROLS—easy access to the finest in controls, Minneapolis-Honeywell.



CERAMICLAD HEAT EXCHANGER—a TEMCO exclusive—warranted against rust and burn-out—standard equipment on the "Pre-Vent"



SAFE—hermetically sealed—no flue or chimney needed—uses only outside air for combustion.



PROFITABLE—dealers report less service calls on the TEMCO "Pre-Vent" than on any other thru-the-wall gas heater.

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Mail this coupon for name of your nearest TEMCO distributor!

TEMCO, Inc., Dept. BP, Nashville 9, Tenn.

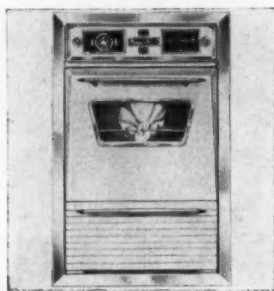
NAME _____

STORE _____

ADDRESS _____

CITY & STATE _____

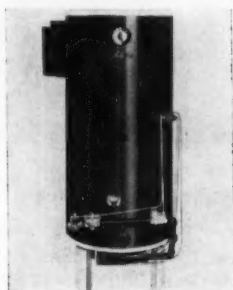
For further information use Readers' Service Cards on pages 81, 82



Built-in oven has no-button relighting system

Circle 25 on Readers' Service Card

Features of this new 18-in. built-in oven are: recessed control panel with no exposed oven vent; a no-button automatic pilot lighting system; an oven control which keeps food warm at temperatures of 140 deg.; a "roastender" which buzzes and turns oven off at selected temperature; and a triple split rotisserie. Tennessee Stove Works. (GEC 240).



Self-contained heater supplies 180-deg. sanitizing water

Circle 26 on Readers' Service Card

A new large size instantaneous booster water heater (GEC 860), with 40-gal. capacity and 135-gph reheat capacity at 100 deg. rise, carries a full five-year warranty. It is a completely self-contained water heating system. When equipped with a mixing valve it simultaneously supplies 180 deg. sanitizing water and 140 deg. general purpose water. Day & Night.

Hose flexibility increased 30 per cent

Circle 27 on Readers' Service Card

Flexibility is improved 30 per cent in the new "Flexwing" tank truck hose and water suction hose (GEC 430). Ease of handling and safety are also assured by specially-placed spiral wire and textile braid. Goodyear Tire & Rubber Co.

FREE LITERATURE

Duct furnace blower units

Circle 28 on Readers' Service Card

Two Reznor K series packaged blower units—K1, with one blower and K2, with two blowers—are designed to match Reznor's gas-fired duct furnaces. Brochure includes performance data tables and sketches. Reznor Manufacturing Co. (GEC 410).

Monthly weather forecast

Circle 29 on Readers' Service Card

A monthly weather forecast, produced by Weather Trends Inc., is distributed free to the LPG field as a complimentary service of Lee Cylinders Division of Golay & Co. Inc. The Weather Reporter is suggested for use as a sales aid in planning for air conditioning and heating sales programs. (GEC 550).

Pipe identification kit

Circle 30 on Readers' Service Card

A free kit is offered to maintenance and safety personnel to aid in planning a standardized system for identifying pipe. Included are a six-page planning guide, specifications and five-year guarantee details. W. H. Brady Co. (GEC 500).

Protective coating brochure

Circle 31 on Readers' Service Card

How "Fence-Bond" paint, applied directly on rust, stops rust action and provides complete protection of chain-link fence is described in a four-page brochure. Description and prices of many more coatings are included. (GEC 610.) Skybryte Co.

Brochures on three ranges

Circle 32 on Readers' Service Card

Three pieces of literature on Caloric Appliance Corp.'s 20, 30, and 36 in. "Deluxe" gas ranges (GEC 240) show photographs, specifications and new features. Also outlined is the Beatrice West color-planning service available free to homemakers upon purchase of a range.

Portable orchard heater

Circle 33 on Readers' Service Card

A portable orchard heater, the "heat-mobile," which has been in

**"We licked
the freeze-up
problem in**

19,300 LP-Gas systems with Du Pont Methanol"

...says K. H. Dickson, President,
The Uregas Companies, Moberly, Missouri

"Just one-half gallon of Du Pont Methanol per 500 gallons LP Gas—that's how we lick the old freeze-up problem," continues Mr. Dickson. "Du Pont Methanol keeps our lines and containers free from moisture . . . our customers' systems free from trouble. And when you've got 19,300 customers, that's a lot of costly service calls you won't have to make."

For one customer or 19,300, you can rely on the quality and uniformity of Du Pont Methanol to protect your LP Gas. It's 100% volatile, water-soluble, does not react chemically with gas.



Howard Weatherford of Uregas pours Du Pont Methanol into storage tank. Only one half gallon is required to protect this 500-gallon storage tank against hydrates and icing.

Let Du Pont Methanol eliminate *your* freeze-up problem. You need only 5 to 10 gallons per 10,000 gallons gas. Your Du Pont Agent listed below is ready to give you prompt, reliable service.

TYPICAL ANALYSIS

Purity Exceeds	99.9%
Non-Volatile Content	0.0005
Water Content	0.05



BETTER THINGS FOR BETTER LIVING...THROUGH CHEMISTRY

For fast, dependable service—contact your local Du Pont Methanol Agent

ARIZONA
Phoenix Braun Chemical Co.

CALIFORNIA
Los Angeles Braun Chemical Co.
San Diego Braun Chemical Co.
San Francisco Braun-Knecht-Heimann Co.

COLORADO
Denver Braun-Knecht-Heimann Co.

FLORIDA
Jacksonville Apperson Chemical, Inc.
Miami Biscayne Chemical Labs, Inc.
Orlando Lenfestey Supply Co.
Tampa Lenfestey Supply Co.
Tampa Miller-Lenfestey Supply Co.

GEORGIA
Atlanta Chemical Services, Inc.

IDAH0
Boise Van Waters & Rogers, Inc.

ILLINOIS
Addison Phillips & Martin Co.
Chicago Central Solvents & Chemicals Co.

INDIANA
Fl. Wayne Hoosier Solvents & Chemicals Corp.
Indianapolis Hoosier Solvents & Chemicals Corp.

IOWA
Des Moines Miller Chemical Co.

KANSAS
Wichita McKesson & Robbins Inc.*
Wichita Universal Motor Oils Co., Inc.

KENTUCKY
Louisville Dixie Solvents & Chemicals Co.

LOUISIANA
Lafayette Chemical Service, Inc.
New Orleans Southern Solvents & Chemicals Corp.

MARYLAND
Baltimore Leidy Chemicals Corp.

MASSACHUSETTS
Boston Howe & French, Inc.
Fall River Borden & Remington Co.
Westfield Eastern Chemicals, Inc.

METROPOLITAN NEW YORK
Lyndhurst, N.J. Stoney-Mueller, Inc.

MICHIGAN
Detroit Western Solvents & Chemicals Co.
Grand Rapids Wolverine Solvents & Chemicals Co.

MINNESOTA
St. Paul Lyon Chemicals, Inc.

MISSOURI
Joplin McKesson & Robbins, Inc.*
c/o Union Transfer & Storage Co.

Kansas City McKesson & Robbins, Inc.*
Missouri Solvents & Chemicals Co.
St. Louis Missouri Solvents & Chemicals Co.
Springfield McKesson & Robbins, Inc.*
c/o General Warehouse Corp.

NEBRASKA
Omaha Miller Chemical Co.

NEW JERSEY
Lyndhurst, N.J. Stoney-Mueller, Inc.

NEW MEXICO
Albuquerque Braun Chemical Co.

NEW YORK
Albany Eastern Chemicals, Inc.
Binghamton Collier Chemicals, Inc.
Buffalo Buffalo Solvents & Chemicals Corp.
Johnstown S. H. Ireland Chemical Co.
New York Stoney-Mueller, Inc.
Rensselaer Eastern Chemicals, Inc.
Syracuse Eastern Chemicals, Inc.

NORTH CAROLINA
Durham Cardinal Products, Inc.

OHIO
Cincinnati Amsco Solvents & Chemicals Co.
Cleveland Ohio Solvents & Chemicals Co.
Toledo Toledo Solvents & Chemicals Co.

OKLAHOMA
Oklahoma City Ward Chemical & Supply Co.
Tulsa Ward Chemical & Supply Co.

OREGON
Portland Van Waters & Rogers, Inc.

PENNSYLVANIA
Pittsburgh Vitro Manufacturing Co.

RHODE ISLAND
Providence Borden & Remington Co.

TENNESSEE
Memphis Chapman Chemical Co.
Nashville Chapman Chemical Co.

TEXAS
Dallas Texas Solvents & Chemicals Co.
Dallas Van Waters & Rogers, Inc.
El Paso Braun Chemical Co.
Houston Texas Solvents & Chemicals Co.
Houston Van Waters & Rogers, Inc.

UTAH
Salt Lake City Braun-Knecht-Heimann Co.
Salt Lake City Wasatch Chemical Co.

WASHINGTON
Seattle Van Waters & Rogers, Inc.
Spokane Van Waters & Rogers, Inc.

WISCONSIN
Chippewa Falls Lyon Chemicals, Inc.
La Crosse Wisconsin Solvents & Chemicals Corp.
Milwaukee Wisconsin Solvents & Chemicals Corp.
*Barada & Page Branch.

GEARED FOR ACTION!

Sound like a play on words? Not on your life! The gears in every Smith LPG pump provide the longest wear under difficult conditions. Precision-made to handle very thin liquids (LPG is 10 times thinner than water), they are unusually strong and tough. Even a file will hardly mark these super-hard gears made of specially developed materials.



Designed exclusively for LPG service,

Smith Pumps offer these additional built-in features:

Special Balance Design: center pump gear is surrounded by two to four idler gears.

Shaft Rotates in Either Direction: two-way operation allows piping to be installed in most convenient manner.

Patented Mechanical Shaft Seal: self-adjusting packing requires no lubrication or servicing.

Longest Service Life: superior materials developed especially for LPG pumps give longer wear.

There's a Smith pump for every LPG service requirement: for small, medium, or large volume transfer work, combination pumps, truck pumps, high capacity heavy-duty pumps, and special pumps.



Murray 2-2293 or Murray 2-2691

PRECISION PRODUCTS COMPANY
1135 MISSION STREET, SOUTH PASADENA, CALIFORNIA

Southeastern Distributor: **Pond-Johnston Inc.** Warehouses in Mobile, Ala.; Jacksonville, Fla.

Western States Distributor: **Teece Products, Inc.,** 3920 West Burbank Blvd., Burbank, California.

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Developments Each Month**

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Free literature

use for three years, is described in a three-color brochure. Testimonials of growers are included as well as specifications and a diagram showing how to heat an orchard. The heat-mobiles are effective in fruit orchards and in protecting young, low-growing plants. Robinson Blower & Engineering. (GEC 001.)

Why and when to change oil

Circle 34 on Readers' Service Card

The costly practice of using oils after they have lost their ability to perform properly is described in a four-page report entitled "How to Select the Proper Motor Oil Drain Interval for Automobiles." It points out why motor oil needs changing and explains driving conditions which further the need for changing oil. Lion Oil Co. (GEC 450.)

Gas combustion, control data

Circle 35 on Readers' Service Card

An eight-page catalog, describing gas combustion and control equipment, folds out to show all burners and mixers on one face, blowers and accessory items on the back. It may be put into a binder for convenience. Each item is identified so the complete data sheet on any product can be ordered (GEC 080). Bryant Industrial Products Corp.

Clothes dryer applications

Circle 36 on Readers' Service Card

A 32-page booklet entitled "When Is a Dryer More Than a Dryer?" illustrates myriad clothes dryer applications (GEC 120). The booklet carries 18 photographs of normal and unusual gas dryer applications. Norge Div., Borg-Warner Corp.

L. P. gas regulator film

Circle 37 on Readers' Service Card

A new sound and color film (GEC 700) covers "Essential Elements" and "Care and Feeding" of LPG regulators, through the use of cartoons and diagrams. Running time of the film is 35 minutes. It fits a 35mm projector with 33 1/3 rpm record player. Fisher Governor Co.



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*A Handy Reference Library of
12 Practical Booklets*

Each booklet is a collection of the best articles on the titled subjects which have appeared in Butane-Propane News. 15 or more subjects under each cover, from 48 to 64 pages of information written by authors recognized for their experience in the industry and their technical know-how.

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Please send me, postpaid, the booklets ordered below.

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(In California add 4% sales tax.)

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Build loads with metered service



AMERICAN® WC-45-LPG METERS

Attractive welded steelcase meters provide ideal metered service for average LP-Gas loads. Quality construction assures years of accurate measurement at lowest maintenance cost.

- internal, counter-type, tamper-proof index
- removable soldered top
- bellows-type, molded Duramic diaphragms
- one-piece Nylon valve guides
- impact-resistant plastic index box cover
- handy wall-mounting lugs
- synthetic grommet-type flag rod seals
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Rated capacity 45 cfh propane and 40 cfh butane at 1/2-inch w.c. differential—5 psi working pressure—1/2-inch F.P.T. connections—shipping weight 8 lbs.—FOB Philadelphia.



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METER COMPANY
INCORPORATED ESTABLISHED 1926

General Offices: Philadelphia 16, Pa.
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EVERYONE'S A CUSTOMER
FOR A DEARBORN



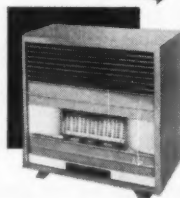
"What a lure!"

No one can resist the beauty... the charm... the downright heating comfort of a new Dearborn. Your "regular" customers, too, are certain to buy when you show them a few of Dearborn's great heating features. The Dearborn Control Center, for example... assures complete heat control and greater operating economy because it activates the Thermo-thrust Blower exactly as the user desires. Another reason Dearborn is the top heating value on the market today.

CONTROL CENTER



Push-button controls activate the most powerful blower in the industry. May be used for summer as well. With Dearborn, it's a "set it and forget it" operation.



The Dearborn Regency is the world's finest gas area heater. Lower, longer and loaded with sell-on-sight appeal

Dearborn®

Get details of Dearborn's clean-cut selling policy from any of these regional sales offices: Atlanta, Chicago, Dallas, Los Angeles, San Francisco.

1960 Dearborn Stove Co., Dallas



news

Tax reform sure with Democrats or Republicans

Whether the Democrats or Republicans win in November, tax reform is a sure thing.

Both parties now call for tax changes to stimulate economic growth. This may mean tax cuts for the general public. President Eisenhower's announcement that the government had a \$1.1 billion budget surplus for the year ending June 30 seems to add fuel to the tax-cutting fire.

Campaign platforms may be misleading, however. A bitter election battle will result in sharp increases in government spending. To fulfill campaign promises, tax increases are more likely than tax cuts.

The Republicans, no doubt, will try to liberalize depreciation rules on business equipment. They hope, too, to reduce individual taxes in the top brackets, and revise tax subsidy rates enjoyed by cooperatives. But Republicans are promising better defense and more foreign aid. Both cost money. Money is most likely to come from higher taxes.

Democrats say the man in the lower bracket should get any tax cut benefits. But they are more interested in closing so-called "tax loopholes." Closing loopholes will mean tightening of businessmen's expense account write-offs, a tax on dividends and interest, collecting billions of tax dollars owed but not collected, and others.

Federal government could control LPG shipments

Tighter federal regulation of private shipments of dangerous articles, including L.P. gas, was in a nip-and-tuck battle as Congress wound up its pre-convention session.

The measure would affect all shipments of L.P. gas over the road by dealers, jobbers, and producers—if they meet the compli-

cated test of being "in interstate commerce."

At present, privately-owned trucks hauling dangerous articles are immune from most federal regulation. The drive to broaden federal coverage was touched off by the explosion of a private dynamite truck in Roseburg, Ore., last year.

Major changes the proposal would make include: subjecting private carriers to the same penalties as common carriers (fines up to \$10,000 and five years imprisonment compared with \$100 fines now); strengthening the power of the Interstate Commerce Commission to police private shipments of dangerous articles; lightening the burden of proof necessary for conviction of violations; and strengthening the role of state and local authorities in policing the act.

Spokesmen for the Compressed Gas Assn. opposed the legislation during congressional hearings as unnecessary, disruptive, and creating conflicting enforcement patterns.

Meanwhile, the ICC took under study a petition from four railroad unions asking for a new study of grade crossing accidents involving tank trucks. They say that present laws should be tightened to prevent collisions between trains and trucks hauling dangerous articles.

Spokesmen for the National Tank Truck Carriers replied the study was unnecessary, citing new figures showing petroleum tank truck carriers have a better-than-average safety record of .34 accidents for each 100,000 miles, compared to the truck industry average of .37.

Uregas purchases Whiteley-Milliken

Uregas Companies has recently purchased the Whiteley-Milliken LP-Gas Co. Inc. of Columbia, Mo. Former owners of Whiteley were Charles Milliken, president; Fred



Kenneth H. Dickson, president of Uregas Companies, hands a check to Charles Milliken (l.) in payment for the Whiteley-Milliken LP-Gas Co. Inc. Standing is Uregas comptroller J. W. Branson.

Whiteley, vice president, and Mrs. Charles Milliken, treasurer.

Included in the purchase were the 18,000-gal. propane bulk plant and bottled gas filling station north of Columbia, 1400 bulk and bottled gas customers, seven vehicles, accounts receivable and the inventory of LPG appliances and equipment.

Uregas now has 24 bulk plants, operating in 90 counties in eastern Missouri and western Illinois. These plants serve approximately 80,000 L. P. gas customers either direct or through the 238 authorized Uregas dealers in the area.

Temco to celebrate its two-millionth space heater

The two millionth Temco gas space heater will be manufactured on Sept. 6: In celebration of this milestone in its history, Temco will hold a week-long celebration with the theme "Temco Thanks Nashville." A unique departure from the usual approach of stressing the importance of an industry to its home community, Temco and its 550 employees are going to tell the people of Nashville what Nashville has meant to Temco.

Emphasis will be placed on the fact that Nashville, through its industry and business and its fine supply of skilled and unskilled labor, has provided Temco with most of the material and personnel to reach this milestone.

A highlight of the Temco Thanks Nashville celebration will be an industrial show featuring products

of local Temco suppliers. Temco will install a large "circus" tent on its parking lot and invite certain of their suppliers to set up displays of their products.

The general public will be invited. These display spaces are offered free to the suppliers. In addition Temco will have open house with conducted factory tours. The show and open house will last for one week.

In addition the *Nashville Tennessean*, Nashville's morning and Sunday newspaper, will publish a special section on Temco on Sunday, Sept. 4. There will be full color photographs of scenes at Temco and the entire section will be devoted to "stories" on Temco.

The Governor of Tennessee, Buford Ellington, the Mayor of Nashville, Ben West, and Wister H. Ligon, president of AGA, have been invited to participate and will help build the 2,000,000th unit.

In carrying out its theme of Temco Thanks Nashville, Temco will donate to the Nashville Chamber of Commerce a group of gas lights which will be installed outside the beautiful new Chamber of Commerce building. A ceremony will be held there with F. Donald

Enterprise means rust-proof



No worry about hidden rust spots! Enterprise is all-porcelain, inside and out! Mar-proof! Scratch-proof! Acid-resistant! Extra durable!

- Backguards with interchangeable colors!
- One piece, "Uni-Weld" construction!
- Same top quality construction . . . all models!
- FREE FLOOR PLAN!
- Generous co-op advertising!

Get full details on the Enterprise range line . . . your money-maker with the features that SELL! Write for new 1960 catalog!

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**FOR THE BEST
in quality and
performance
specify famous
GEM**

**TRADEMARK PRODUCTS
INDUSTRY TESTED AND AP-
PROVED. MAKE GRIFFITHS
YOUR FIRST CHOICE FOR
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FREE CATALOG AVAILABLE

THE E. F. GRIFFITHS CO.

346 E. Walnut Lane

Phila. 44, Pa.

Serving the Gas Industries for Over 40 Years

News

Hart, president of Temco, making the presentation.

Also Temco will furnish a brochure commemorating this event and designed to show what Nashville can mean to any industry located in its vicinity. These will be distributed nationally.

All of this will tie in with Temco's "National Temco Month" celebration to be held across the United States and Canada. During National Temco Month Temco dealers everywhere are offering free aprons to the consumers just for coming in to see the Temco line. Purchasers of Temco equipment will receive free blankets. During this promotion over 10,000 blankets will be given away.

Temco distributor salesmen are competing for free automobiles and trips to the Temco plant.

Temco Inc. was organized in September 1921. During the first few years the company primarily was engaged in jobbing work, furnishing finished parts to local stove manufacturers. In 1932 Temco began manufacturing gas-fired space heaters. A few years later gas-fired floor furnaces and wall furnaces were introduced and more recently central heating equipment was added to the Temco line. In October 1958 the Magic Chef line of gas and oil space heaters was purchased. On April 1, 1959 the company acquired a facility that does precision machine work for missile manufacturers.

November 1960 brings natural gas to Alaska

Residents of Anchorage, Alaska will receive natural gas by November 1960, when a \$17 million pipeline and distribution system goes into operation. Residential and commercial consumers have been using bottled gas service.

Completion of a transmission line approximately 80 miles long built by Alaska Pipeline Co. will link Anchorage with wells discovered last year on the Kenai Peninsula. The \$12.8 million pipeline will have a daily capacity of 71 million cu ft without compression. Anchorage Natural Gas Corp. is completing a \$4 million distribution system to serve Anchorage and the Public Utility District of Spenard.

FTC settles price discrimination case

The dispute between General Natural Gas Corp., Monticello, N. Y., its subsidiary, Sungas Products of Pennsylvania Inc., Scranton, and the Federal Trade Commission has been settled. The FTC approved a consent order prohibiting the companies from charging different prices to competing customers.

Stating that some of the favored and unfavored customers compete with each other in reselling the gas, the FTC complaint charged that these price discriminations may have substantially lessened competition or tended to create a monopoly.

FTC pointed out that the agree-



Ugite Gas Inc., Malvern, Pa., is combining two of the best elements of the AGA and the LP-Gas Council promotion by emphasizing the "Living Pleasure" provided by L. P. gas. Note how the full-color, hand-painted display departs from most transport truck advertising. Interest and favorable comment has encouraged Ugite to paint other transports in its fleet utilizing this same idea.

News

ment is for settlement purposes only and does not constitute an admission by the respondents that they have violated the law.

Zenith LPG school starts September 19

Zenith Carburetor Div. of The Bendix Corp. will start fall sessions of the Zenith Factory LPG school Sept. 19. Except for the week of Nov. 21, a new class begins each Monday until the end of November. Each week-long course covers instruction in engines, carburetion, installation, safety and sales. On completion of the course students are supplied a set of technical manuals.

Registration fee is \$15. For further information and applications write Zenith Carburetor Div., Detroit, Mich. Classes are limited to 15 students and applications are accepted on a "first-come" basis.

Circulating heat oven receives AGA approval

The Keating Wimco oven recently received approval from the American Gas Association Laboratories. The Wimco is a circulating heat oven that has set new records for roasting meat and for baking.

In field tests the oven reduced meat shrinkage from 6 $\frac{2}{3}$ to 10 per cent, saving the entire purchase price and installation cost within two weeks. It bakes yeast raised rolls in seven minutes and sheet or layer cakes between 12 and 15 minutes.

The AGA Laboratories, the National Restaurant Association Research Committee and the Navy Development Facility at Bayonne, N. J. all contributed to the production of the Wimco oven.

The oven was unveiled at the National Restaurant Convention in May 1959 and has since awaited AGA approval. It is now available under natural gas and L.P. gas requirements.

Tuloma sales engineer presented Jaycee award

M. Julian Norris, 30-year-old sales engineer for Tuloma Gas Products Co., Tulsa, was recently named one of the five outstanding first-year Jaycees in the nation. He was presented the award at the

recent annual national convention of the Junior Chamber of Commerce in St. Louis.

Selection was based on the individual's knowledge and participation in the Jaycee's civic and community projects. Norris, a member of the Tulsa chapter, previously won local and state competitions.

In his first year of membership, Norris served as chairman of two civic committees, was active in the state organization and elected to the board of directors of the Tulsa chapter, the fifth largest in the U. S.

Skelgas demonstrates at radio station celebration

When radio station KMMO, Marshall, Mo., staged its 11th anniversary celebration, Skelgas was chosen to participate in a special cooking school. The local Skelgas distributor, Jackson Appliances, has been an advertiser on KMMO's women's program for over 11 years.

More than 850 homemakers attended cooking demonstrations performed on Skelgas ranges held in the station's Mary Lou Theater.

PUMPS ITS WEIGHT EVERY HALF- SECOND



Here's the pump that profit-conscious transporters have wanted for years. It's Blackmer's new aluminum Model TLG4—gallon for gallon, the lightest LPG pump ever built. Total weight—just 86 lbs. Yet it unloads up to 300 gallons per minute—pumps its own weight in propane every four tenths of a second! You save two ways—a bigger payload and less turn-around time. We make the same pump in nodular iron for equally fast transport loading. Get the full story. Write for Blackmer Bulletin 500.



"liquid materials handling"® equipment

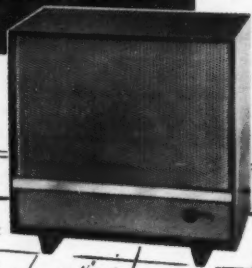
BLACKMER

/ liquefied gas pumps

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Find your Blackmer Man under "Pumps" in the Yellow Pages

**Sell
BEAUTY AND
COMFORT
INSURANCE**



Set the New Armstrong 200 Series Vented Gas Heaters beside a modern Hi-Fi console and you'll agree "it's at home in any home"—with any furnishing decor.

It's Armstrong beauty that closes sales and rings your cash register. **AGA Approved**—Sizes 15M to 30M btu—Finest drill port, cast burner—Optional controls.

Beautifully finished in durable, dark tan "Mochatone" enamel and gold silicone enamel expanded metal front.

Write or wire for information on a truly complete line, 8,000 to 70,000 btu's, vented and unvented.



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Huntington 12, W. Va., Tel. JA 3-0165

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GAS METERS

For
ACCURACY
DEPENDABILITY
EASY MAINTENANCE

Also in sizes 200

THE SPRAGUE METER CO.
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News

The chefs were Skelgas district salesman, W. E. Phares, KMMO women's program director, VanCiel Blum, and Wayne Ferrin, Horman Packing Co.

Potter nominated for AGA presidency

Lester T. Potter, president of Lone Star Gas Co., Dallas, has been nominated for president of the American Gas Association. Elections will be at the AGA's 42nd annual convention.

Currently first vice president of the association, Potter is among 31 executives from the gas industry nominated to serve as officers, directors and Section chairmen for 1961.

Nominated for first vice president is Edward H. Smoker, president, The United Gas Improvement Co., Philadelphia; for second vice president, John E. Heyke, president, The Brooklyn Union Gas Co., Brooklyn; for treasurer, Charles H. Mann, treasurer, The Columbia Gas System Inc., New York.

LP-Gas Council revises two sales aids folders

Two new folders, one describing "loads of power" on the farm and the other "living pleasure" in the home, have been released by the National LP-Gas Council as dealer sales aids for members.

The blue living pleasure folder is shaped like a gas flame. It de-

scribes the full line of LPG appliances and heating equipment, stressing modernity and automatic controls. The tractor folder, shaped like a tank, lists six ways a farmer can save money with LPG and get more power.

For minimum orders of 500, the tractor folder is priced at 1½ cents each, the full line folder, at 2 cents. Imprinting and handling costs are provided free by the Council.

LPG heats plastic tobacco-curing barn

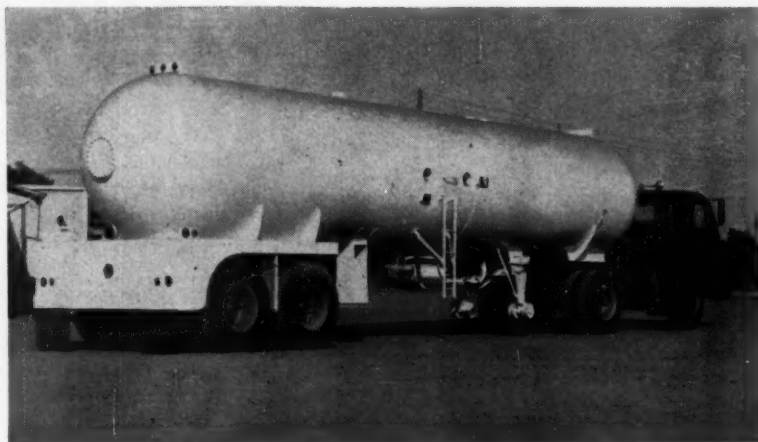
Plastic film, a petroleum derivative, is playing a new role in agriculture. At Clemson Agricultural College, a clear plastic tobacco barn has been constructed by John A. Martin, associate horticulturist.

According to Martin, the plastic structure has many advantages over the conventional type barn, with cost being a major factor.

Last summer tests showed that aromatic tobacco of high quality could be obtained by curing under plastic, with results similar to those achieved by curing it in the sun.

The clear plastic permits the ultra-violet rays to penetrate and reach tobacco leaves while they are being cured. Heating, too, is handled economically, by five Gas-tobac burners using LPG.

The \$300 barn is 12x12x12 ft and has a 4-in. lumber framework covered with a clear .008 gauge plastic. The building is easily converted into a greenhouse when not in use as a tobacco barn.



Master Tank & Welding, Dallas, designed and manufactured this 10,300-gal. blimp. Gauges are recessed in the tank's sides and the rear is completely enclosed. Other features include vapor proof lights, a retractable landing gear, fire extinguisher niche, nail guards, a removable ladder and tire rack and manway cover.

Spendthrift Farm converts to LPG

Beautiful Spendthrift Farm near Lexington, Ky., breeding place of the famous racehorse Nashua, has gone all the way for LPG.

Sidney Leathers, farm manager, became interested in L. P. gas last year and had one tractor converted on a trial basis. After a year, the carefully-kept performance records showed the superiority of L. P. gas.

Spendthrift owner Leslie B. Combs II and Leathers gave the go-ahead for a complete conversion. Eight tractors and three Toro mowers with model 23 Briggs and Stratton engines were changed over to Algas by Kentucky Ignition Co., Lexington.

Spendthrift stores the LPG in a 1000-gal. tank on the farm and is supplied by Dick Jett of Lexington.

Leathers is "tremendously impressed" and states: "When we can add engine life, we don't care about the age of the vehicles. It is extremely important for me to retain the usefulness of an engine. The long life made possible by this conversion has completely sold me!"


The farm manager points out the drop in oil consumption, fuel pilferage and maintenance and upkeep as three vital advantages of LPG.

NEWS BRIEFS

American Home Laundry Manufacturers' Association reports that gas combination washer-dryer unit sales rose 11 per cent from May's 2424 to June's 2689. In the first six-months period, 23,649 units were sold. Gas dryer units dropped five per cent from 24,235 in May to 22,903 in June. In the first six-months period, unit sales rose two per cent, from 167,611 to 170,269.

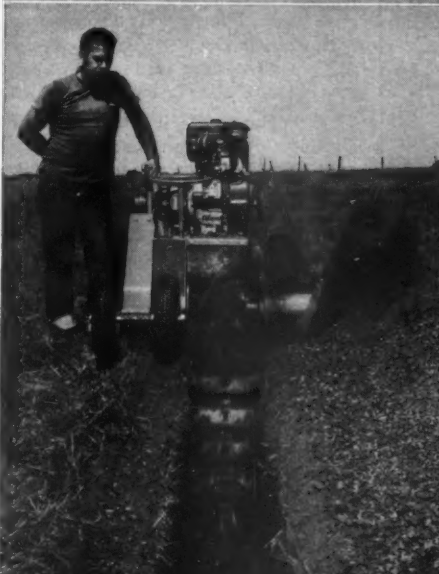
Mark Anton, former New Jersey senator and principal stockholder in Suburban Propane Gas Corp., is embarking on what is for him a new field. He is the directing figure in a \$2.5 million lagoon venture called Skippers Cove in Waretown on Barnegat Bay. It's a 250-home development that ties in with Suburban's L. P. gas and appliance manufacturing operations.

The Chilean government has recently ordered 12 semi-assembled 30,000-gal. storage tanks from Master



The measure of Success

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SCALE

COMPARE

SIZE: DIGS FROM 4" TO 16" WIDE AND UP TO 6' DEEP

COSTS: AS LITTLE AS 2c PER FOOT

ABILITY: JOB PROVEN

LIFE: AS HIGH AS 1/2 MILLION FEET

EASE OF OPERATION:
See a demonstration!
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POWER VENTED

NO FLUE
NO CHIMNEY

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ONLY Suburban NOVENT* AND DYNAVENT* GAS HEATERS Are POWER VENTED

In fact, no other heaters have ALL these money-saving, space-saving, fast heat features that make Suburban NOVENT* and DYNAVENT* Gas Heaters your best profit-makers . . .

- Install in window or wall (like an air conditioner) • Safe—burn no room air • Automatic, with choice of built-in or wall thermostat
- Built-in forced warm air circulation system • Even heat, floor to ceiling and wall to wall • SAVE UP TO 30% and more, in fuel costs.

Three sizes available for all gases - 20,000 BTU - 35,000 BTU - 45,000 BTU—Approved by AGA, CGA, CSA, Leading Utilities and LP-Gas Marketers—Nationally advertised in consumer magazines

Send for details

SUBURBAN APPLIANCE CO.
Dept. BP-940
*TM Suburban Appliance Co.

Morristown, New Jersey



Speedy Therm has a secret
and . . .

it's a **GASSER!**



SPEEDY THERM INC.
1505 RACE ST., PHILA. 2, PA.

News

Tank & Welding, Dallas. The tanks will leave for Chile from Longreach Docks, Houston. Chilean government engineers will assemble and erect the tanks upon arrival. Each tank is 112% in. OD.

The Material Handling Institute Pacific Coast Show has been booked into the San Francisco Cow Palace from Feb. 22-24, 1961. A space drawing is followed by booth assignments on Sept. 9. More than 220 exhibit booths are available to potential exhibitors.

In late July, four construction spreads had completed 541 miles of the 1800-mile Mid-American Pipeline Co. LPG products pipeline. President John H. Williams reports that the firm has been awarded a contract by Delta Engineering Corp. (agents for the Alaska Pipeline Co.) for construction of 72 miles of a 12-in. natural gas pipeline from a point on the Kenai Peninsula to near Anchorage, Alaska.

The Skelly Oil Co., Tulsa, plans to build a wholly-owned gasoline plant five miles north of Minneola, Kan. on Federal Highway 283. Saleable products are expected to be about 15,000 gal. per day, including propane which will go to existing LPG markets. Construction begins about mid-September.

Eclipse Fuel Engineering Co., Rockford, Ill., recently moved its Dowtherm vaporizers and boiler accessories to a new manufacturing plant in Chattanooga, Tenn. Sales and service facilities will also be headquartered at Chattanooga.

Midland Heating & Cooling Supply Co., 814 W. 17th St., Kansas City, opened its doors July 1. The new wholesale firm will distribute the complete line of Day & Night Manufacturing Co.'s residential and commercial heating and air conditioning equipment. A. A. Loudis, former Day & Night purchasing agent, is launching the new firm.

Construction is underway on a new 10,000-sq ft facility for Robertshaw-Fulton's Grayson Controls Div., Long Beach, Cal. The new structure will provide additional engineering space

SUPPLIERS

Warren Petroleum Corp., Tulsa is offering a "Home Heating Contest" to Warrengas and Gulftane LPG distributors to increase their home heating volume. Each contestant is required to complete in 25 words or less the statement: "I would like to heat my home with Warrengas (or Gulftane) because . . ." The distributors will advertise via radio, newspapers or direct mail. The winner in each distributor's area will receive a six month's supply of Warrengas or Gulftane.

Auto & Aero Supply Co. Inc., Cincinnati, recently completed a two-day school on LPG. Mechanics and sales representatives from dealers and distributors of LPG and conversion equipment attended. The extra sessions were held to take care of the student overflow unable to get accommodations in June classes.

Sid Harvey of New Jersey has opened a new store to serve Red Bank, Long Branch and Asbury Park. The store, located at 22 Main St., Eatontown, will carry a full line of replacement parts for oil and gas burners. It will be managed by Warren Sackett, former manager of the Trenton store.



USE HANDY

ELLISCO
REG. U. S. PAT. OFF.

BRUSH TOP CANS



for applying pipe dope, touch-up paint, leak detectors and similar liquids

Sturdily constructed, leakproof, ELLISCO Brush Top Cans are specially designed to make it easier to apply pipe dope, touch-up paint, leak detectors and other liquids. Everyone likes these cans because:

- they save time and trouble, are convenient, easy-to-carry, always ready for use.
- high quality brush won't dry out when not in use because it remains immersed in the liquid.
- brushes are firmly attached to screw caps. Eleven different ELLISCO Brush Top Cans are in stock ready for prompt shipment. Capacities are from 3 oz. to 1 qt. Write, wire or call for complete information.

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BALDWIN 3-3405



Fits Any Tank
Lights Quickly
and Simply

Stock BROYHILL HANDI-HEATERS for increased sales and for customer satisfaction. Operates from bottle gas. AGA approved Automatic Shut-Off and Temperature controls. Sell BROYHILL Stock Tank Heaters—performance proven on thousands of farms.

the **Broyhill** COMPANY DAKOTA CITY, NEBRASKA

Richardson storage suit settled for \$1.5 million

The independent executors of the estate of Sid W. Richardson have made a settlement of \$1,500,000 for two suits pending in the Federal Court at Amarillo. The suit, against Skelly Oil Co., and Pan American Petroleum Corp., involved the validity of a patent held by Richardson covering the storage of LPG in underground solution washed salt cavities. Warren Petroleum Corp. and Socony Mobil Oil Co. Inc., intervened in the case on the side of the defendants. The owners of over 86 per cent of the industry's underground salt storage capacity have contributed to the settlement and will receive immunities from suit under the settlement agreement. The remaining owners of underground storage have 90 days in which to contribute to the settlement and receive like immunities.

for the design, development and testing of new control devices for the gas appliance industry. The estimated cost of the new wing is \$175,000 and completion is expected by late October.

Hydrotherm Inc., has enlarged its manufacturing space 25 per cent by the addition of a new wing to the Northvale, N. J. plant.

Janitrol Heating and Air Conditioning held its Institute of Dealer Management Forum No. 7 in 14 cities during July and August. The forums highlighted plans for selling the modernization heating market.

Teeco Products Inc., Burbank, Cal., is now exclusive distributor of L.P. gas burners in California for Barber Manufacturing Co., Cleveland. Teeco now will distribute the "jet burner" units as well as atmospheric and power gas conversion burners.

DEALERS

Suburban Gas, Pomona, Cal., reports sales for the fiscal year ending April 30 as \$15,310,928, a 35 per cent gain over last year's \$11,378,979. Net profit was \$1,766,449 compared with \$1,069,238 last year. After preferred dividend earnings were equal to \$1.44 a share based on 1,193,682 common

shares. Last year earnings based on 1,178,852 common shares were 86 cents per share.

Superior Propane Ltd., Toronto, Ont., reports that for the period ending May 31, bottled gas installations jumped 46 per cent over last year. Net profit rose to 38 cents a share, compared to 35 cents per share for the 1959 period.

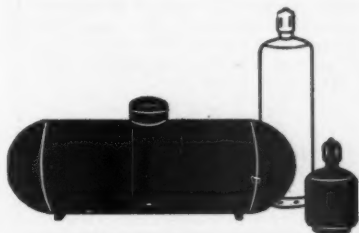
General Gas Corp., Baton Rouge, reports an increase of 17.8 per cent in LPG sales during the first five months of this year. Total sales for the period ending May 31 reached 52,483,890 gal. as against 44,528,319 gal. for the same five months last year.

A group of independent L. P. gas men recently bought the Miller Ruralgas Co., Vandalia, Mo. The company name will be changed to Vandalia Heet Gas Co. The new owners are Homer Phillips, Dean Phillips and Joe Murfin of the Heet Gas Co., Lewistown, Mo., and Bill Stock and John Norris of Cyllindro Gas Co., Quincy, Ill.

National Propane Corp., New Hyde Park, N. Y., acquired the L. P. gas distribution business of an El Paso Natural Gas Co. subsidiary. The newly purchased company is in the "four corners" area of New Mexico, Utah, Colorado and Arizona. The transaction involves El Paso's wholesale, industrial, commercial and retail business.

Five Thermogas salesmen from Iowa are winners of the company's annual Sales Managers' Award. The awards were presented to those doing an outstanding job of selling LPG appliances and Thermogas bulk systems. Recipients of the awards are: Burt Burton, Charles City; Melvin Kent, Waterloo; Theo Bailey, Fairfield; Merle Thompson, Algona; and Bernard Johnson, Jr., Shenandoah.

Cotton Butane was recently opened in Espanola, N. M. The new company will handle all major appliances and bottled and domestic service.



Brilliant Fire

is years ahead

NEWEST HEATERS
IN AMERICA

Vent-O-Magic
Sealed Heating

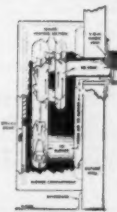


Consumer Approved Packaged Heating

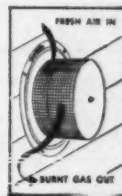
Sells like magic, because it heats like magic. That's Vent-O-Magic the dramatically different wall heater. Slashes installation time—requires no ductwork or chimney. Completely sealed exchanger; burnt gases cannot enter room.

True packaged heating. No extras to buy. Completely assembled by skilled factory technicians. Minimum service assures highest profits.

The exclusive Magic Vent literally breathes through the wall for safe, quiet, comfortable heating. Fully A. G. A. approved—even for 24" wall installation with some models.



HERMETICALLY
SEALED HEAT
EXCHANGER



V-O-M MAGIC
VENT BREATHES
THRU WALL

Available in 10,000 to 35,000
BTU/hr input ratings

Forced Air Available for
Immediate or Later Addition

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- Dept. BPN-960
- P. O. Box 191
- Steubenville, Ohio
- Rush me full information on Brilliant Fire Vent-O-Magic heaters.
- Name: _____
- Company: _____
- Street: _____
- City: _____ State: _____



CLASSIFIED Advertising

All Classified Advertising payable with order. No agency commission or cash discount on classified advertising. Copy must reach publisher's office prior to the 1st of the month preceding publication. Address: Classified Advertising Materials, BUTANE-PROPANE News, 198 S. Alvarado Street, Los Angeles 57, Calif.

DISPLAY CLASSIFIED

\$12.00 a column inch per issue. Choice of 18, 14, 12, 10 pt. display type for headings. Set with 1 pt. border. Maximum ad size 3". No cuts permitted. Publisher will set ad for maximum effect in space purchased.

UNDISPLAYED CLASSIFIED 15¢ a word. Set in 6 pt. type without border. \$6.00 minimum charge per insertion. If Blind Box number card of B-P News is used, count as five words.

POSITION WANTED. Undisplayed rate is one half of above rate, payable in advance.

When full payment is made in advance for four consecutive insertions of undisplay classified ads, a 10% discount is allowed.

SITUATIONS WANTED

LP PLANT MANAGER OR CARBURETION sales and service. Ten years experience in management, sales promotion, carburetion, service. Prefer Western states. Reply Box 27, BUTANE-PROPANE News, 198 So. Alvarado St., Los Angeles 57, Calif.

HELP WANTED

DEALERSHIPS OPEN: EXPERIENCED MAN IN LPG, bottles and bulk. Agency Agreement. Good opportunity if has railroad siding and spur. RESTRICTED TERRITORIES. WE FURNISH EVERYTHING. Tank Car material. Butane or Propane. Ross Oil, Inc., Belleville, Illinois.

EXCELLENT OPPORTUNITY FOR NON-EST, hard working family man who wishes to get ahead. Must be a self-starter requiring a minimum of supervision and have had at least 2 years L. P. Gas service and installation experience. Reply stating qualifications in own handwriting to: Liberty Propane Co., 2450 Frontage Rd., Arcata, Calif.

MANAGER TO HANDLE SALES AND act as Assistant to President. Must be fully experienced in all branches of gas sales. Only highest calibre need apply. Located on the Southeast Gold Coast of Florida. Old established company, opening new office. Good salary and commission. All fringe benefits and good working conditions. Please mail resume and late picture to Box 42, BUTANE-PROPANE News, 198 So. Alvarado St., Los Angeles 57, Calif.

SUN OIL COMPANY SOLGAS DIVISION seeks SALES ENGINEER

Excellent opportunity for a man who has considerable experience in L.P.G. Producer sales. Interested qualified applicants are invited to send, in writing only, a resume giving full particulars of background to Mr. Harry Maxwell, Jr., Personnel Manager, Sun Oil Company, 1000 Walnut Street, Philadelphia 3, Pa.

BUSINESS OPPORTUNITIES WANTED

WANTED TO PURCHASE: RETAIL LP-GAS business in Midwestern or Southeastern states. Reply Box 13, BUTANE-PROPANE News, 198 S. Alvarado St., Los Angeles 57, Calif.

BUSINESS OPPORTUNITIES OFFERED

LPG BULK PLANTS. WE SPECIALIZE in selling petroleum properties throughout Midwest. Have number desirable plants for sale. OLE BRODD, PETROLEUM MARKETERS, 605 Produce Bank Bldg., Minneapolis, Minnesota.

L-P GAS BUSINESS FOR SALE IN rapidly growing area in Arizona. Past year 270,000 gallons at 7¢ average mark-up. Serving 300 customers. Past year's volume increased by 75% over previous year. For more information write Box 33, BUTANE-PROPANE News, 198 So. Alvarado St., Los Angeles 57, Calif.

FOR SALE: L.P. GAS and APPLIANCE business. 24,000 gallon storage, 2 trucks, 1 pickup, 140-100 lb. cylinders. Population of town 2300, in heart of irrigation district. No natural gas in town or area. Reply Box 38, BUTANE-PROPANE News, 198 So. Alvarado St., Los Angeles 57, Calif.

BUSINESS OPP. OFF.—Cont.

FOR SALE: WELL ESTABLISHED RETAIL Butane business. Located in Southern state. Good equipment, good customer account. Owner retiring. Reply Box 44, BUTANE-PROPANE News, 198 So. Alvarado St., Los Angeles 57, Calif.

COMPLETE FUEL BUSINESS FOR SALE. LPG, gasoline, and diesel three bobtails, transport tanks and truck. Located in south central irrigated farming belt, only dealer of LPG in town of ten thousand. Ample storage of all types. Terms to responsible party. Reply Box 43, BUTANE-PROPANE News, 198 So. Alvarado St., Los Angeles 57, Calif.

FOR RENT or LEASE

6,000 to 30,000 PROPANE STORAGE for sale, rent or lease. Financing and installation available. Reply Box 16, BUTANE-PROPANE News, 198 So. Alvarado St., Los Angeles 57, Calif.

FOR SALE — TRUCKS - TRAILERS

EXCELLENT QUALITY USED TRANSPORTS—Trinity's "trade-in transports" are tops in low-overhead value. Because Trinity sells more new transports—Trinity has the choicest "used transport" selections—late models—new paint—good rubber and ready to make you money. Twins (3600/6500 W.G.), blimps (7000/7400 W.G.), and neckdowns. Low down payment and terms. Phone Fleetwood 7-3961 now. Trinity Steel Co., 4001 Irving Blvd., Dallas 7, Texas.

FOR SALE—1951 GMC WITH 302 engine complete with twin 1,800 gallon L.P. tanks. Smith pump, 1 1/2" Neptune Print-O-Meter, hoses, etc. Will sell with or without 2,500 gallon single barrel "pup" trailer. All in good condition, ready to go. Priced to sell. Crossroads Cooperative Association, North Newton, Kansas. Phone AT 3-1970.

USED PROPANE DELIVERY TRUCKS, 1200 GALLONS W. C. Presently in use and being replaced with larger units. United Petroleum Gas Co., 4820 Excelsior Blvd., Minneapolis 16, Minnesota.

30 DAY SPECIAL!

1960 Chev. #C-6303, 2 speed, 825 x 20, 10 ply rear tires, H.D. springs, PIPED COMPLETE with 1800 gal. twin propane tank, rear cabinet, packaged plumbing, Viking pump, Neptune Print Meter, ICC lights, 20 lb. fire ext., filler & vapor hoses, remote controls, painted, Fed. Tax PAID. ONLY \$6,368.00 Cash or \$653.00 Down and 36 payments of \$189.15 including interest. SAVE over \$500.00 by BUYING NOW!

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All sizes NEW & USED UNITS—Single—Twin

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Haul More Gas . . . Less Steel . . . Load and Unload Faster . . . Earn More Money!

You can do it with skillfully engineered, sleek designed, carefully balanced Nor-Tex units. The 2500 WG Single Barrel Payload Special of 202B X-rayed material weighs only 12,890 lbs. . . . Just right to escape the annual Federal tax on trucks weighing over 13,000 lbs. Pump delivers 50 GPM. Single and Twin Barrel Nor-Tex units available in four models: The "Standard" . . . The "Custom" . . . The "Payload Special" . . . The "De Luxe". Twin units, up to 2000 WG, mounted on 84" cab to axle. You can haul more gas . . . more profitably . . . in less time in a Nor-Tex unit. We are also truck distributors. You can't beat a Nor-Tex deal for all-around value!

For prices, write, wire or phone

NORTH TEXAS TANK CO.

Denton, Texas

DUPont 2-5416

AVAILABLE: SEVERAL GOOD QUALITY, used twin-barrel 200# W. P. transports. Any reasonable offer will buy these budget priced units. Trinity Steel Company, Inc., 4001 Irving Blvd., Dallas, Texas. Fleetwood 7-3961.

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PROPANE TRUCK TANKS

SINGLE UNITS—Up to 2800 Gal.

TWIN UNITS—Up to 2200 Gal.

Lightweight A-202B or C-1056 Steel . . . X-Rayed . . . Latest Code. Completely Plumbed . . . 4 Models. Fleet Prices All Makes Trucks. Let Our 15 Years Experience & Thousands of Satisfied Customers be Your GUARANTEE of Satisfaction.

10% Down . . . 36 Months on Balance
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Call or Write . . . PRESTON GRACE

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CLASSIFIED Advertising



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A SMART WAY TO MAKE MONEY ON YOUR TRANSPORT—If you're expanding your transport fleet you'll find excellent bargains (and extremely low overhead) in buying used transports from Trinity Steel. For Trinity has the best used equipment buys and widest selection by virtue of doing a tremendous new transport business. Down payments are extremely low and terms let you keep more working capital. All Trinity "trade-in" units have good rubber—new paint, and are in A-1 condition. Twins, blimps and neckdowns. Call Fleetwood 7-3961 today. Trinity Steel Company, 4001 Irving Blvd., Dallas 7, Texas.

FOR SALE USED PROPANE TRUCKS

Several late model, 1000 to 1500 gal. . . re-conditioned and ready to roll. Easy Terms. We Trade. New Trucks too.

WHITE RIVER DISTRIBUTORS
Phone RI 3-2374—Batesville, Ark.

FOR SALE—TANKS - CYLINDERS

TWO USED 30,000 GALLON PROPANE TANKS in good condition. Located in Charlotte, N. C. area. Write to Box 42, BUTANE PROPANE News, 198 So. Alvarado St., Los Angeles 57, Calif.

FOR SALE— 1 18,000 GAL. PROPANE tank; 2—5 hp motors; 1—5 hp Brunner compressor; 1 Dayton Daud pump; truck loading equipment; tank car unloading equipment; hose, fittings, dog house, fence and gates. Write Kay Gas Co., Box 606 Blackwell, Okla., or Phone 162.

PROPANE GAS SYSTEMS

"Listed by Underwriters' Laboratories, Inc." If you use as many as one load of tanks per year, it will pay you to contact us. Distribution throughout the Mid-West and Southern states.

LOWRY TIMS COMPANY
Quality Steel Products Division, Cleveland, Miss.

FOR SALE

1—30,000 gallon used propane storage complete with fittings, ladder and walkway. Good as new. \$9,250.00 f.o.b. location.

Mid-Continent Butane Equipment Co., Inc.
P. O. Box 2113, Wichita, Kansas
Phone HO 4-3411

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DECALS MADE FOR TRUCKS, EQUIPMENT. Small or large quantities. Catalog free. Mathews Co., 827 S. Harvey, Oak Park, Ill.

FOR SALE—IMMEDIATE DELIVERY! Eureka Smokehouse Burner Assemblies! For meat smoke houses using bottled gas. Completely automatic. Clean filtered smoke. Distributes heat uniformly. Low gas consumption. Automatic temperature and pilot control. Less product shrinkage. Easily installed. Write for descriptive pamphlet. Eureka Equipment Company, P.O. Box 396, Beloit, Wisconsin.

DIXIE SEMI-LOCK HOODS, ALUMINUM and Aluminum coated steel. Wall bracket or free standing. GUARANTEED mechanically for life. \$3.00 up. Dixie Manufacturing Company, Elizabethtown, Kentucky, Box 65. Phone Collect RO-5-9229.

FOR SALE—MISC.—Cont.

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With cross top freezers — late model, glass Freezer door, vegetable crispers. Used, excellent condition, guaranteed in good operating order.

Low delivery cost. Special price for half or full trailer loads. Send for photo and details.

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INCREASE YOUR PROFITS BY APPLYING my accounting and financial controls that show proper Ratios for your operations. Evaluations, Equipment revisions, and accident suit assistance also supplied. Floyd F. Campbell, Management Consultant, 821 Crofton Ave., Webster Groves 19, Mo.

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Designed and Installed

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APCO Standby - Peak Shaving

Mixers and Plants

Safe - Simple - Automatic
Design - Engineering - Construction

APPLIED ENGINEERING COMPANY

Orangeburg, S. C.

L. P. GAS INSURANCE

Have your agent write us about our Complete and Comprehensive Coverage for Adequate Limits of Liability at Reasonable and Normal Rates with Specialized Safety Engineering and Claim Service. Available only in Alabama, Arkansas, Arizona, Florida, Georgia, Kansas, Louisiana, Mississippi, New Mexico, Oklahoma and Texas.

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Earl W. Gammage, President

P. O. Box 1662 Houston, Texas

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NOW! BE FIRST TO GUARANTEE "AUTOMATIC" LP-GAS DELIVERY! Gas delivery whenever customer's tank gets low. The HIDE Degree-Day Recorder keeps you accurately informed of customer's supply on hand. Lets you schedule deliveries more efficiently and save 30% of trucking and book-keeping costs. Write for free details in Booklet CBS. And we'd like to know if you're now using a degree day system. HIDE-BROWN Recorder Co., 6988 Five Mile Road, Cincinnati 39, Ohio.

BUSINESS RECORDS—Cont.

BUSINESS RECORD FORMS. ALL-WEATHER EZE-SNAP delivery invoices, for use when making LP gas metered truck deliveries. 1000 sets (3 part) imprinted with name, address and telephone. \$18.00 per 1000 sets. Advise make of meter. DEGREE DAY SYSTEMS, Dept. BP WOODSIDE 77, L. I., N. Y.

SERVING 20,000 PETROLEUM COMPANIES over 30 years with petroleum price cards, customer reminder Eze-Stik labels, telephone call—service order—L/P metered delivery invoices, Eze-Snap Service Form, Duraluminum ticket holders, Sort-O-Matic Rack, etc. Write us for details, no obligation. DEGREE DAY SYSTEMS, Dept. BP., WOODSIDE 77, NEW YORK.

The KNOW-HOW BOOK for LPG

• DEALERS • SALESMEN • SERVICEMEN

The Bottled Gas Manual has been accepted by many companies as the quickest way to acquaint new sales and service men with typical bottle gas problems. This 352 page (24 chapter) text book brings practical "working" facts to your entire staff in non-technical language. Nearly 10,000 copies in use.

\$4.00 per copy

We pay postage on orders accompanied by check or money order. In California add 4% for sales tax.

Butane-Propane News

198 S. Alvarado Street, Los Angeles



Boss, I found the leak and saved a buck on a haircut!

★ How can you sell more appliances during the highly competitive Christmas season?

★ What is the most popular holiday season promotional activity among LPG dealers?

**WATCH for
the October issue
with—**

the 1960 Christmas Sell-O-Rama

Designed to fit YOUR needs, it's based on two special national BPN reader surveys — one made during the height of the last Christmas season, the other just completed.

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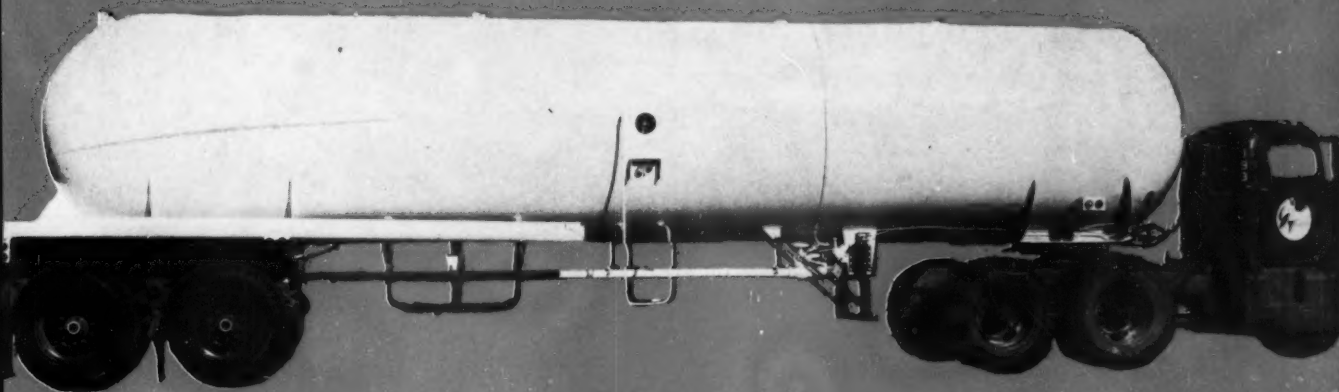
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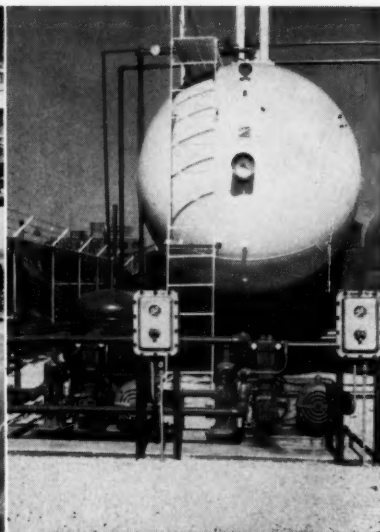
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